

**UNIVERSITY OF VAASA  
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**LEADERSHIP DEVELOPMENT IN HEALTHCARE INDUSTRY  
Case study**

Master's Thesis in  
Industrial Management

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## FOREWORD

This thesis is made from Stiina Vistbacka's dissertation's pre-study questionnaire. The results of this thesis will be utilized in Stiina's dissertation.

I want to thank Josu Takala from University of Vaasa for supervising this thesis and giving me the opportunity to do my master's thesis on this topic.

I want to thank to Stiina Vistbacka for the opportunity to utilize her questionnaire as a material for my thesis and make my own research based on that.

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## SYMBOLS AND ABBREVIATIONS

$\lambda_{max}$  Principal eigenvalue

$r$  Correlation coefficient

AHP Analytical Hierarchy Process

C.I. Consistency index

C.R. Consistency ratio

DAC Developmental Assessment Center

ELT Experiential Learning Theory

R.I. Random index

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**VAASAN YLIOPISTO****Teknillinen tiedekunta**

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**TIIVISTELMÄ:**

Johtajana kehittyminen nähdään yhtenä kilpailutekijänä organisaatioissa. Sairaanhoidon piirissä on nähty selkeä tarve panostaa johtajana kehittymisen mahdollisuuksiin, jotta myös tulevaisuuden haasteet voidaan selättää. Tutkielma käsittelee johtajana kehittymistä uratapahtumien ja kokemusoppimisen kautta. Tutkielman kohteena on organisaatio, joka on yksi Suomen sairaanhoitopiireistä.

Tutkielman tavoitteena on selvittää kyselytutkimuksen avulla tärkeimmät tekijät, jotka vaikuttavat johtajana kehittymiseen. Tutkimustuloksia analysoimalla pyritään lisäksi selvittämään, onko näillä tekijöillä keskenään riippuvuuksia, sekä onko eri ammattinimikkeiden välillä eroavaisuuksia. Tutkimusmenetelmänä käytettiin kyselytutkimusta, joka lähetettiin ennalta määritellyille vastaanottajille. Vastaukset analysoitiin käyttämällä analyttistä hierarkiaprozessia (AHP).

Tutkimustuloksien perusteella voidaan todeta, että työtehtävien kautta saatu henkilökohtainen kokemus ja oppi sisältävät kaikista tärkeimpiä tekijöitä johtajana kehittymiseen tällä alalla. Näitä tekijöitä ovat muun muassa erilaiset muutosprosessivastuut ja toiminnan uudelleen organisointi. Tätä tukee myös se, että vähiten tärkeimpiä tekijöitä ovat metodit, jotka liittyvät oppimisen edistämiseen esimerkiksi mentoroinnin tai 360 arvioinnin tai muun sellaisen puitteissa. Eroavaisuuksia lääkäreiden ja hoitajataustaisten henkilöiden välillä on hyvin vähän. Keinot, jotka edustavat työssä saadun kokemuksen kautta oppimista, tulevat myös ammattiryhmissä esiin tärkeimpinä keinoina. Nämä ovat samat kuin yleisissä tuloksissa saadut elementit. Eroavaisuuksina havaittiin lääkärien kohdalla, että he kokivat tärkeinä kehittymisen mahdollistajina ulkoiset haasteet sekä sparrailun oman esimiehen kanssa. Hoitajataustaisilla korostui näiden sijaan johtamiskoulutuksen käyminen ja työn sisällön muutos kehittymisen tärkeimpinä tekijöinä. Työssä vertailtavien tekijöiden kesken on havaittavissa jonkin verran riippuvuuksia toisiinsa, niin positiivista kuin negatiivista.

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**AVAINSANAT:** johtajuus, kehittyminen, AHP metodi, uratapahtumat, kokemusoppiminen

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**ABSTRACT:**

Leadership development is seen as one of the competitive advantages that organizations have. It has been identified in healthcare industry that there is a need to invest in opportunities for leadership development in order to conquer the future challenges. The research investigates leadership development through career events and experiential learning. The research is made of an organization which is one of the hospital districts in Finland.

The aim of this research is to find out priorities for the events that are affecting the growth in leadership development. It is also analysed if these events are having dependencies with each other. Occupation specific results and the differences within them are analysed separately. Research method used to gather the research data was a questionnaire. The questionnaire was sent to predefined recipients. The responses were analyzed by using analytical hierarchy process (AHP).

From the research results it can be concluded that events that are part of learning from experience are the most effective ways in leadership development. These events are personal experiences and they can be for example different responsibilities of change and reorganization of operations. This is also supported by the fact that the least effective events are methods that are related to development activities such as mentoring and 360 evaluation or similar feedback program. Differences between doctors and healthcare workers are not much. The events that represent learning from experience appear among both occupations as the most effective ways to develop. These events are the same as what has been discovered in the overall results. Doctors are valuing externally challenging situations and sparring with superior as development methods. Instead of these two, healthcare workers value attending to management training and changing the content of work. Comparison between the different events introduced in the research reveals that they have some interdependence between each other, both positive and negative.

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**KEYWORDS:** leadership, development, AHP method, career events, experiential learning

## 1. INTRODUCTION

### 1.1 Purpose and background of the study

This thesis is made for one of the hospital districts in Finland. The topic came straight from researcher Stiina Vistbacka as her pre-study questionnaire will be used as a research material in this research. The research will concentrate on leadership development in healthcare and especially within persons who are doctors and healthcare workers.

*“Are leaders born or made?”* (Brungardt 1996: 82)” This is a question that has been the most argued among leadership studies. The answer is both, they are born and they can also be made through training and development. Many companies consider leadership development to be part of their competitive advantages. During the last decade, the research around leadership has concentrated less on the skills and behavior and more on the fact that everyone can grow to become a leader. Even though leadership has been researched for many decades, there is still no definition for what skills and abilities a leader has. The overall knowledge of leadership development is still rather new. (Brungardt 1996: 82; Bennett 2004: 4; Day, Fleenor, Atwater, Sturm & McKee 2014: 64.)

There are many reasons why companies want to develop their leaders. Examples of these are mentioned by Beardwell and Claydon (2004: 365):

- Have new ways of thinking and the ability to drive cultural change;
- Inspire others with opportunities to influence and create new ideas;
- Improve knowledge and skills for new opportunities;
- Improve knowledge in order to utilize new technology;
- Be able to be a facilitator in the implementation of new system, process or practice.

(Beardwell & Claydon 2004: 365.)

Health Management Academy (Wells & Hejna 2009: 66) conducted a survey for leaders in healthcare companies and in companies that were listed in Fortune 500 list. Based on the results five key elements for development of leaders were introduced as ways to deal with the challenges the future brings. These five elements are:

- Recognizing the important skills needed for leadership.
- Planning of the work in efficient way.
- Focusing on leadership development and how to maintain it.
- Leadership development for all the levels the organization has.
- Continuous evaluation of leadership and performance. (Wells & Hejna 2009: 66.)

Organizations with effective leaders are more innovative, high performing and having ability to overcome challenges in new ways. If the leadership is missing, it has been identified that for example implementing new strategic changes will be more difficult or even not possible. In order to be high performing organization, it is important to invest in the leadership development. (Amagoh 2009: 989–997).

Many have experienced healthcare industry to have a complex way in coordination when comparing to other industries. This is because healthcare organizations are bit different as they have many hierarchies of professionals including administrative and clinical parts. The leadership in this kind of environment is challenging. Research show that managerial learning is clearly being prioritized low or the need has not been noticed. This is the reason why these organizations need strong leadership and the development of the leadership is important. (McAlearney 2006: 968–970.)

## 1.2 Research challenge and problem definition

The aim of this thesis is to find out if there are certain events in leader's career that have an impact on one's growth in leadership. Aim is to find out if the events have any relations to each other and does person's background, current position or any other person specific element, have any effect on what is the most effective way of development. The study is limited to leaders in healthcare industry in Finland in specific area. Majority of the leaders are from middle management and some from top management.

Based on the background and objectives the following research questions were identified.

RQ1. Can we identify events in person's life that has affected the growth of leadership and what is their importance?

RQ2. Do the events have any correlation between each other? In other words, are they having relations with each other?

RQ3. Can we identify differences between different occupations? Especially if there are any differences between doctors and healthcare workers.

## 1.3 Structure of the study

This research consists of seven main chapters. The first chapter introduced the topic of the research and its background to the reader. Research questions are also identified. Second chapter is covering the theoretical framework that has been chosen to use. It will introduce the definition of leadership, career events and experiential learning.

In chapter three the research method will be described that has been used for gathering the data and analysing it. This research is quantitative research and the research method chosen is called analytical hierarchy process (AHP). In addition to that also theories behind consistency and correlation are described.

Research methodology is the topic for fourth chapter. This research is a case study that is conducted as a quantitative research. The data collection method is introduced and the scope of respondents is created. Fourth chapter also concentrates on what kind of role validity and reliability has in this research.

Analysis of the data and the empirical part of the research is done in chapter five. Limitations to the handling of results are described. The data from the questionnaire is analysed with the help of research method tool in order to get answers to the identified research questions. The sixth chapter is for discussion about findings and how to connect them to theory. The research questions are being answered. Last chapter will conclude the research. It will also introduce possible further research possibilities.

## 2. THEORETICAL FRAMEWORK

### 2.1 Leadership

#### 2.1.1 Definition of leadership

Leadership has many definitions as it has been difficult to define it. There are almost as many definitions as there are persons defining it. In literature, the leadership has been defined from different aspects. (Yukl 2013: 21.) John C. Maxwell (1998) has said that “*leadership is influence - nothing more, nothing less*” (1998: 19).

Bass has defined leadership as following.

*Leadership has been conceived as the focus of group processes, as a matter of personality, as a matter of inducing compliance, as the exercise of influence, as particular behaviors, as a form of persuasion, as a power relation, as an instrument to achieve goals, as an effect of interaction, as a differentiated role, as initiation of structure, and as many combinations of these definitions. (Bass 1990: 11.)*

Schein’s definition emphasizes leadership’s ability to initiate change.

*Leadership is now the ability to step outside the culture that created the leader and to start evolutionary change processes that are more adaptive. This ability to perceive the limitations of one’s own culture and to evolve the culture adaptively is the essence and ultimate challenge of leadership. (Schein 2004: 2.)*

The only thing that all these definitions have in common is the fact that they include the idea where leadership consists of a process to influence people in their activities in order to reach certain goal. Otherwise they differ from each other e.g. with what is the goal, who is the person who is influencing others and how is it done. (Yukl 2013:21.)

### 2.1.2 Leadership versus management

John Kotter describes that leadership is something that creates movement. Management is more of making sure things are done on time and on budget. (Kotter 1990: 4.) The difference between leadership and management needs to be highlighted as they are not the same but might be easily mixed. In this thesis we will concentrate on leadership itself.

In table 1 John Kotter has gathered differences between management and leadership. Based on the differences it is easy to see that management is used more on lower level and leadership on higher level in the organization. Management is managing concrete things in order to achieve the goal. Leadership is more about influencing people for example making them motivated to do certain change.

Let's take an example of changing the way of working. From management side this would mean making the plan to implement the change in the teams and control that it goes smoothly. From leadership side this would mean creating the vision of what we will benefit of having this new way of working, where it is linked, and motivate people in doing it. Basically it is also about implementing the change but in a wider way.



Table 1. Comparing management and leadership (Kotter 1990: 6).

	<b>Management</b>	<b>Leadership</b>
<b>Creating an agenda</b>	<p>Planning and budgeting:</p> <p>establishing detailed steps and timetables for achieving needed results and then allocating the resources necessary to make that happen.</p>	<p>Establishing direction:</p> <p>developing a vision of the future, often the distant future, and strategies for producing the changes needed to achieve that vision.</p>
<b>Developing a human network for achieving the agenda</b>	<p>Organizing and staffing:</p> <p>establishing some structure for accomplishing plan requirements, staffing that structure with individuals, delegating responsibility and authority for carrying out the plan, providing policies and procedures to help guide people and creating methods or systems to monitor implementation.</p>	<p>Aligning people:</p> <p>communicating the direction by words and deeds to all those whose cooperation may be needed so as to influence the creation of teams and coalitions that understand the vision and strategies and accept their validity</p>
<b>Execution</b>	<p>Controlling and problem solving:</p> <p>monitoring results vs. plan in some detail, identifying deviations, and then planning and organizing to solve these problems.</p>	<p>Motivating and inspiring:</p> <p>energizing people to overcome major political, bureaucratic and resource barriers to change by satisfying very basic, but often unfulfilled, human needs.</p>
<b>Outcomes</b>	<p>Produces a degree of predictability and order and has the potential of consistently producing key results expected by various stakeholders (e.g. for customers, always being on time; for stockholders, being on budget).</p>	<p>Produces change, often to a dramatic degree and has the potential of producing extremely useful change (e.g. new products that customers want, new approaches to labor relations that help make a firm more competitive).</p>

In table 2 John McManus has collected the differences between management and leadership based on the focus. This table introduces more concrete elements of leadership. Kotter's comparison table is also supported by these elements. These elements are also telling that management focuses more on concrete things that are needed to be done in order to support the change that is managed on higher level, which in this case is what leadership takes care of. Leadership elements are all focusing on future and have wider perspective e.g. to change.

Table 2. Management vs leadership styles (McManus 2006: 12).

<b>Management focus</b>	<b>Leadership focus</b>
Goals and objectives	Vision
Telling how and when	Selling what and why
Shorter range	Longer range
Organization and structure	People
Autocracy	Democracy
Restraining	Enabling
Maintaining	Developing
Conforming	Challenging
Imitating	Originating
Administrating	Innovating
Directing and controlling	Inspiring trust
Procedures	Policy
Consistency	Flexibility
Risk avoidance	Risk opportunity
Bottomline	Topline

## 2.2 Leadership development: Career events

One can improve different leadership skills by using different methods like training and developmental or self-help activities. Training is usually conducted by professional trainers who concentrate specifically on leadership skills and it is held outside the workplace without any connection to the current work. Developmental activities are usually part of one's work tasks. These activities can be for example coaching by the superior, having tasks with new challenges and possibility to learn new skills. Self-help activities are then those that persons itself can take care of. These activities include for example reading books or articles and watching videos. Gary Yukl presents different career events which fall into these three categories that can be used in leadership development. (Yukl 2013: 423–424.)

Different ways to develop as leader doesn't mean that only one area should be concentrated on. In the figure 1 one can see how the different methods are linked to each other. One can see from the figure that the self-study activities will help with developmental activities. This could mean that one reads about how to handle challenging situations and based on the learning from literature one will use the information in the developmental activity itself. This activity could be in this case a challenging situation in organization. The same way self-help activities and developmental activities are both connected to formal training. All these three areas are supporting each other in the development and one should remember to have activities from each area.

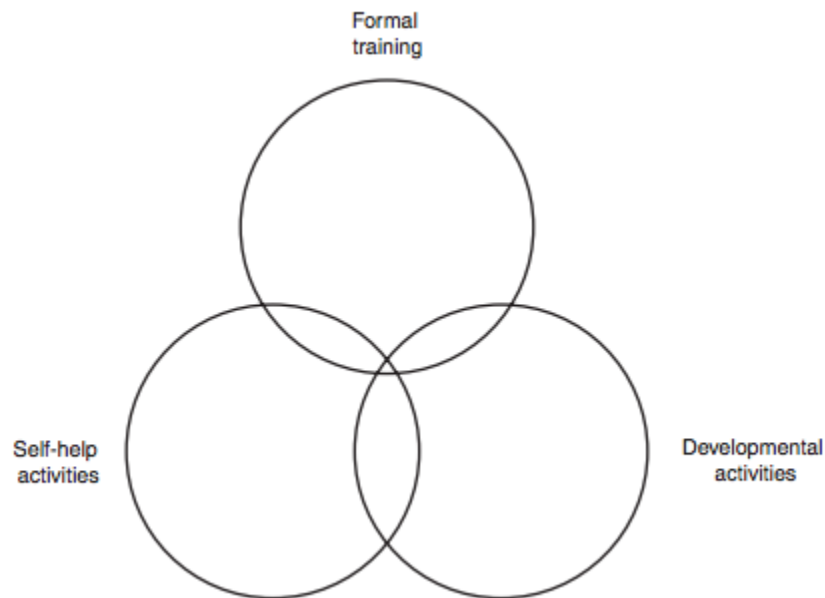


Figure 1. “*Three Ways to Acquire Leadership Competencies* (Yukl 2013: 399).”

### 2.2.1 Leadership training programs

Leadership training programs are usual way to develop leaders. Programs can be organization’s own internal trainings for their leaders or they can be provided by a specific company that offers trainings and leadership seminars. These programs concentrate on those abilities and behaviors that are relevant in leadership and most of them are based on leadership theories. There are a huge variety of different programs starting from a few hours seminar to couple of years’ programs. Some programs are generic for all but many companies also offer tailored options. One example of leadership training program is MBA that is offered by universities. Some companies have their own leadership trainings for their employees and even institutions that are called corporate universities. Motorola and General electric can be mentioned as examples of those. (Yukl 2013: 382; Fulmer 1997: 64.)

### 2.2.2 Learning from experience

Many skills for good leadership are learned from experience. Challenging assignments offer a great opportunity to learn new skills and develop the existing ones. One can easily learn by doing and at the same time one can get support from own manager in a form of coaching or from mentor who both have different own experiences that they can share. This way one can learn from other's experiences. Gary Yukl presents three career events that can be labeled as the ones where one can learn from experience. (Yukl 2013: 384.)

#### *Amount of challenge*

The first career event is called amount of challenge. This means that there is a challenging situation that has for example an unknown problem that needs to be solved. This includes decision making even though the subject might not be familiar and solving problems with the existing knowledge. Implementing a change in organization or handling fusion are examples of challenging situations. In these kinds of situations, it is expected that one should find out new information and new contact persons. It is also expected that one comes out of one's comfort zone and expands the way of thinking. (Yukl 2013: 384.)

Handling challenging situations always include both success and failure. A research at CCL, Center for Creative Leadership, found out that managers, who had experienced failure at the early stage of their career, would be developing as a manager and reach higher managerial positions. The comparison was made to managers, who had experience of successful situations at the early stage of their career who wouldn't have the same potential. Some experiences have been identified to have good impact on the development. These are for example personal trauma and fail in making operational decision. Failure will lead to learning only when person itself accepts the mistake that has happened and it's willing to take responsibility to learn from it. (Yukl 2013: 384.)

### *Variety of tasks and assignments*

The second event is called variety of tasks and assignments. In order to achieve great leadership skills, one needs to have both challenging and different assignments. Managers need to have different type of assignments which they need to handle in various ways. If the assignments are always the same, managers tend to learn one way of doing and they will try to solve new problems with acting the same way as they have learned. It is beneficial for managers to have different managerial assignments in order to have the ability to handle and learn to handle different assignments with needed leadership skills. In order to get extensive experience in leadership, one should have managerial positions in different parts of organization, go abroad for an assignment and have both unit manager and line manager positions. (Yukl 2013: 385.)

### *Relevant feedback*

The third event is called accurate and relevant feedback. A lot can be learned when people receive feedback about their behavior and the result of it. After that they will analyse the feedback and learn from it. Most of the time though it might be hard to get feedback of manager's behavior, at least when it's relating to operational tasks. People will also handle feedback in different way. Insecure persons usually try to avoid feedback relating to weaknesses. Persons, who think that events are not controllable by themselves, will not easily accept failure or learn from the feedback given to them. (Yukl 2013: 385.)

### 2.2.3 Developmental activities

Another group of events are for those that can improve the leadership skills. These events are called developmental activities. These activities can be used when facilitating the learning on specific skills. (Yukl 2013: 385.)

### *Multisource feedback*

The first event is multisource feedback programs which can be also called 360-degree feedback. This kind of feedback programs are mainly used in large organizations and the idea is to identify manager's strengths and potential areas to be developed. The feedback program assumes that the person doesn't have exact idea of own abilities or behavior. By getting the feedback, one knows what areas need to be improved. (Yukl 2013: 385–387.)

Manager will get feedback about own skills and behavior from different sources. These sources can be bosses, peers, subordinates and even outsiders; people all around the person. The sources of information can be seen in figure 2. Even though it is called 360-degree feedback it is possible to be narrowed to 180-degree or even 90-degree feedback based on the need. Only the number of sources to get the feedback from will decrease. (Yukl 2013: 387; Cacioppe & Albrecht 2000: 390.)

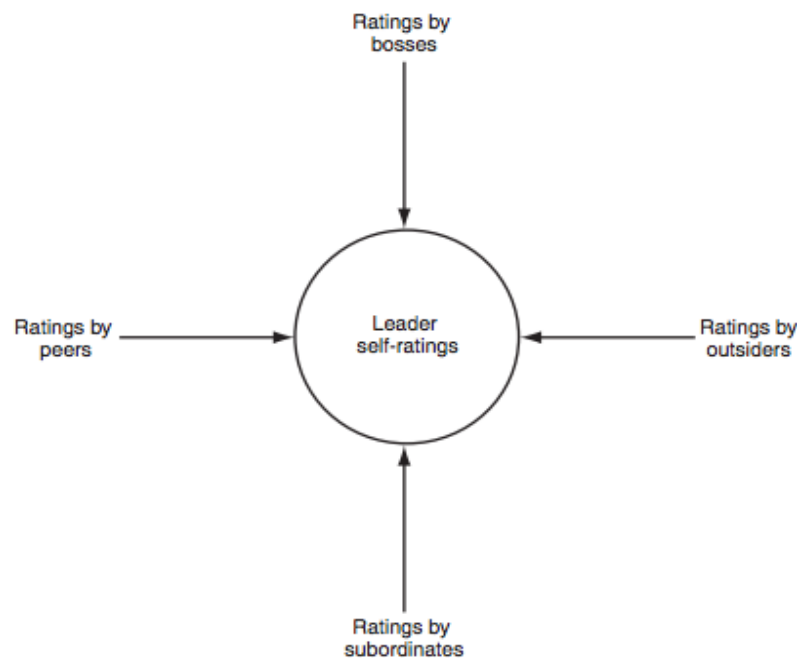


Figure 2. Sources of Information for 360-Degree Feedback (Yukl 2013: 387).

The feedback program was first utilized in the UK military intelligence almost 80 years ago. After that mainly other militaries started using it as well and some companies like Bank of America and IBM. In 1980s Center of Creative Leadership found out that the feedback varied depending on who was giving it. The research then laid the foundation for the multisource feedback program as it is used today and shortly companies started to adopt the program. (Cacioppe & Albrecht 2000: 390.)

#### *Developmental assessment centers*

The second event is developmental assessment centers, also called DACs. In these centers leadership skills are evaluated by using different ways to gather information of the person. These ways include for example interviews, personality tests and writing and speaking assignments. All the information is gathered together and it will be used for identifying person's potentiality for managerial tasks. (Yukl 2013: 388–389.)

In DACs one usually goes through different simulation exercises that are related to situations at workplace. Based on these exercises, person receives feedback and developmental coaching on the skills or abilities that have been identified to be important in one's work role. DACs include elements like training on the identified important skills and exercises where one can learn how to utilize experiential learning in own development. (Thornton & Rupp 2006: 58.)

#### *Developmental assignments*

The third event is developmental assignments. These are assignments that one can handle within the regular job that one has. Examples of these assignments are taking care of a new project, being a representative of own department towards other departments and leading a task force e.g. for operational challenge. (Yukl 2013: 389.)



One way of adding developmental assignments is reshaping the job one has. This means having new responsibilities that are permanent. These tasks and responsibilities could be transferred from someone else or they could be something that no one yet owns but that needs to be done. These assignments don't necessarily have to be inside the current workplace. One could seek opportunities outside as well from for example non-profit organizations or community. (McCauley 2006: 10–11.)

### *Mentoring*

The fourth event is mentoring. Mentoring means a relationship between mentor and mentee. Mentor is usually a more experienced manager who can use own background and experiences in helping younger manager. Mentor shouldn't be mentee's manager and it would be good that mentor is from different area in the organization. Mentor can be utilized in two areas: to encourage and coach but also to help mentee with own connections and challenging mentee. Mentor can help mentee with accomplishing certain goal that could be for example getting a certain managerial position. Mentor will then help with everything where mentee would need; how to get there and how to handle the work. All these skills can be learned by the help of the mentor who can also be seen as a facilitator. (Yukl 2013: 391.)

Mentoring can be divided into different categories depending on the need. Mentoring could be for

- Orientation
- Problem-solving
- Professional development
- Wellbeing
- Career
- Silent knowledge. (Kupias & Salo 2014.)

Mentoring in orientation situations are usually used when new person is starting to work in the organization. Person might need mentoring in order to get to know to the company or to gain specific knowledge that is needed in the position. Mentoring for problem-solving is used mainly by mentee for getting help and new ideas from the mentor in order to solve challenges. Mentor can also tell own experiences of situations where one had to solve specific problems. (Kupias & Salo 2014.)

When one needs mentoring in professional development, it means that one needs some guidance on how to develop certain skills or abilities in one's current position. Example could be that one has been a manager for a year and feels that new ideas are needed in order to become a better manager. Mentoring in wellbeing might be needed if someone is having difficult time. Also discussion about the balance between work and personal life is important topic. (Kupias & Salo 2014.)

Career mentoring is needed in order to go forward in one's career. It might be about seeking a higher level managerial position or managerial position in completely new area where one doesn't have any knowledge of. Silent knowledge can be part of many forms of mentoring. One can gain it only from someone's experience and it is something that can't be learned from books. (Kupias & Salo 2014.)

In mentoring relationship both mentor and mentee should benefit from the relationship. The mentoring it's not only for the mentee. It is also important to get along well and feel comfortable to talk about anything to each other. For example, for women it might be more difficult to find good relationship because of e.g. lack of role models or if they have been blocked out from the networks. (Yukl 2013: 391.)

*Executive coaching*

The fifth event is executive coaching which means individual coaching and it is usually used by high-level leaders. Coach is usually hired for a specific period of time so it is not permanent and the usage will be agreed based on the need. Coach can be either internal or external. Internal coach has already knowledge of the business, ways of working and strategic challenges. External coach in other hand is impartial and might have more experience within the same business and from other industries as well. Coach can be used to help with current or future leadership challenges such as handling difficult changes. (Yukl 2013: 392.)

*Simulations*

The sixth event is simulations that are also known as business games. These games include problem solving and decision making. It could be for example that small group needs to manage certain kind of company; decide products, prices, investments, advertisements and so on. The simulation covers all the parts where managerial decisions are needed and it is easy way to try out different ways to lead. (Yukl 2013: 393.)

*Personal growth programs*

The seventh and last event is personal growth programs which are used to help people learn more about themselves. The idea is to identify possible inner obstacles that person might have and how to handle them in order to grow as a person and be able to improve other necessary skills. These programs are usually organized by conference centers and participants are managers from different companies. (Yukl 2013: 395.)

### 2.3 Experiential learning

Experiential learning theory (ELT) describes learning as “*the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience* (Kolb 1984: 41).”

Experiential learning theory includes six propositions:

- 1) “*Learning is best conceived as a process, not in terms of outcomes* (Kolb, David & Alice Kolb 2005: 194).” There is not a specific outcome in the end of learning. Learning should be seen as a process where experiences modify the knowledge over and over again. One can say that the goal of learning is the process itself. (Kolb & Kolb 2005: 194.)
- 2) “*All learning is re-learning* (Kolb, David & Alice Kolb 2005: 194).” In the learning process, one’s ideas and thoughts about a subject will be examined and the new information, that isn’t equal to the old information, will be integrated together as a new understanding. (Kolb & Kolb 2005: 194.)
- 3) “*Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world* (Kolb & Kolb 2005: 194).” Different opinions and disagreements are the elements that push the learning as the process to go back and forth until solution is found. (Kolb & Kolb 2005: 194.)
- 4) “*Learning is a holistic process of adaption to the world* (Kolb & Kolb 2005: 194).” Learning is not just about experiencing and getting new information. It also includes thinking, feeling and behaving. Beside these other models of adaptation are covered including creativity and problem solving. (Kolb & Kolb 2005: 194.)

- 5) *“Learning results from synergetic transactions between the person and the environment (Kolb & Kolb 2005: 194).”* Learning is impacted by the features of a person and the space. (Kolb & Kolb 2005: 194.)
- 6) *“Learning is the process of creating knowledge. ELT proposes a constructivist theory of learning whereby social knowledge is created and recreated in the personal knowledge of the learner (Kolb & Kolb 2005: 194).”*

Figure 3 presents experiential learning cycle. There one can identify different learning styles. Concrete experience (CE) and abstract conceptualization (AC) are dialectically related. Reflective observation (RO) and active experimentation (AE) are dialectically related. The two first ones are modes of grasping experience and the last two transforming experience. Experiential learning is a process where knowledge is created by using all these four different styles so learner will go through them all as the cycle shows. (Kolb & Kolb 2005: 194.)

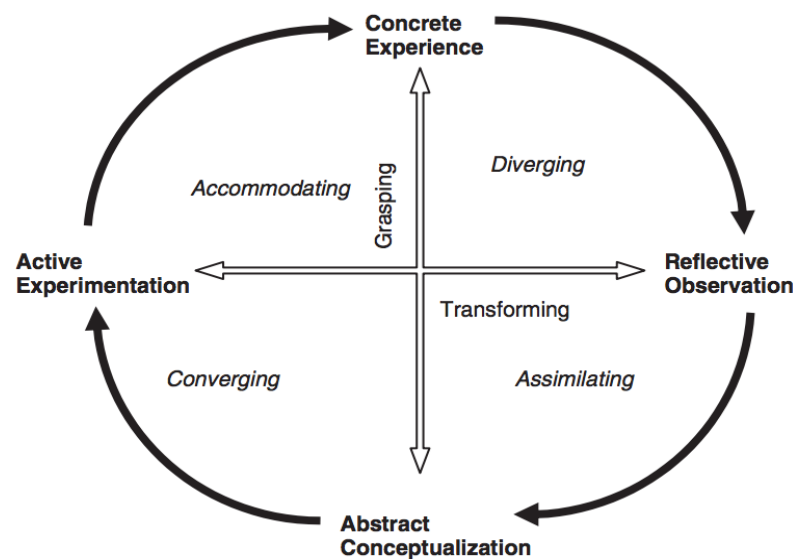


Figure 3. “Experiential learning cycle (Kolb & Kolb 2008).”

In figure 3 the different learning styles are presented: diverging, assimilating, converging and accommodating. From the figure one can see which two ways of learning are most typical for these styles. As for example for accommodating style the ways of learning are active experimentation and concrete experience. People using diverging style are interested in details and want to know as much as possible. They think of everything they experience and can see situations from different angles. People using assimilating style sees things in a wider perspective and can create bigger pictures. They are theory oriented people with logical way of thinking. (Kaye, Kaye & Kolb 2005: 6.)

People who use converging style to learn enjoy creating solutions for problems and they can present them in a practical way. They tend to work alone with testing their ideas. People with accommodating style learn by doing. They are good with their hands and they learn from their mistakes on the way. They don't want to waste time by trying to understand theoretical part of things. These people are that's why depended on other people when for example somethings need to be planned before it can be created. (Kaye et al 2005: 6.)

In figure 4 the process of experiential learning is presented where it links different ways of learning together. All three elements influence each other. Education offers the basic knowledge and combining it with the experience that one gets from work life one can boost own personal development further. (Kolb 2015: 4.)

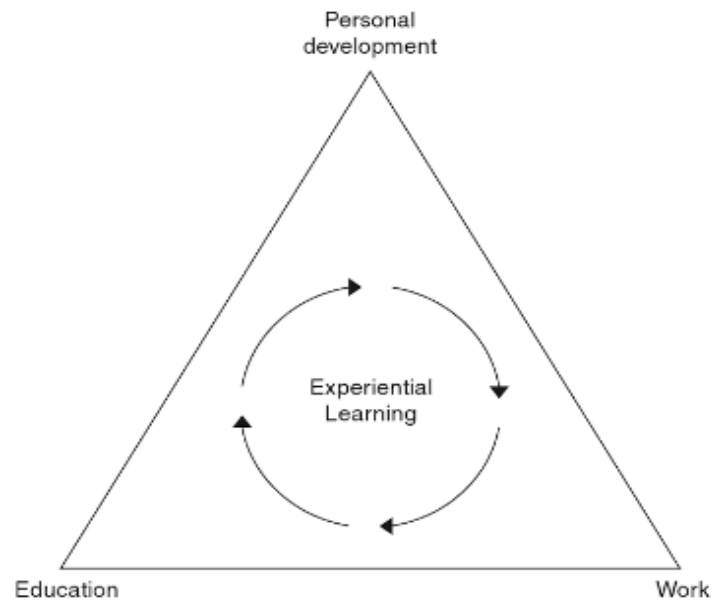


Figure 4. “Experiential Learning as the Process that Links Education, Work and Personal Development (Kolb 2015: 4).”

### 3. ANALYTICAL HIEARCHY PROCESS

#### 3.1 Analytical Hierarchy Process

Analytical Hierarchy Process (AHP) was selected as a data analysis method for this research. AHP is a multi-criteria decision making approach created by Thomas Saaty. The method helps to investigate different attributes, compares them, and based on the comparison, creates priorities to them that will help in decision making. The idea is not to find perfect answer for the problem but instead to find out the most suitable solution that fits the need. AHP can be used for example in different planning's where one must make decisions e.g. using resources in the company or in finding a solution for a problem. (Saaty 1980: 4; Saaty 2008: 83.)

Saaty himself came up with this method while he was working in many different projects to make improvements in developing countries. He saw that there was a need to come up with decisions and to prioritize work and that was when he got the idea to create a tool for it. Saaty has also used this method in several other situations such as in investments of new technologies. AHP method can also be used in everyday life. It is useful method in situations where one for example is buying a new car or selecting a new place to live. (Saaty 1980: 4.) The method is suitable for many different areas from industry to business and to personal life.

#### 3.2 Usage of Analytical Hierarchy Process

The analytical hierarchy process can be described in four steps:

1. Define problem and the subject what needs to be answered.



2. Decision hierarchy is being made. At the top is the goal, the question that needs to be answered. After that there are objectives, also known as criteria that will fulfil the goal. The lower level elements are depended on the criteria. The lowest level is for the different alternatives which represent the possible solutions that are being compared.
3. Create the pairwise comparison matrices.
4. Calculate the priority weights for the criteria. After that the weights of the criteria will be used to calculate global priorities for the alternatives. This calculation is done in each level of the hierarchy. (Saaty 2008: 85.)

In AHP the problem is divided into several sub problems and by finding solution for them, the main problem will also be solved. The reason why the problem is divided into smaller sub problems is because of the fact that people can make decisions easier when the problem is small enough. The first step of the method is to create hierarchy for the situation in question. After the hierarchy is created, prioritization method will be used. (Saaty 2008: 85.)

When one is creating the hierarchy, the following question can be used as a help when identifying the elements: *“Can I compare the elements on a lower level using some or all of the elements on the next higher level as a criteria or attributes of the lower level elements?”* (Saaty 1990: 22)”. This will help in creating the hierarchy in a correct way. Hierarchy can be seen as a real-life situation where all the important elements and their connections have been identified that are part of the situation one is trying to solve. (Saaty 1990: 19–22; Saaty 1980: 17.)

One example of the method introduced by Saaty (1980: 25) is a situation when one must decide the best high school to attend to. There are three options; A, B and C. The hierarchy has been presented in figure 5.

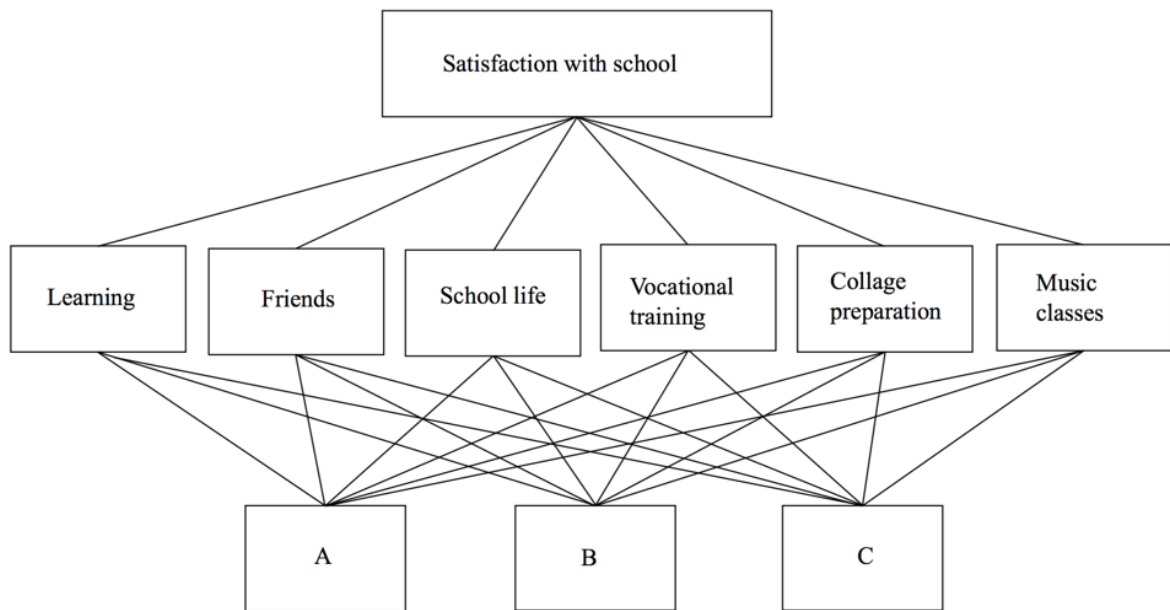


Figure 5. “School satisfaction hierarchy (Saaty 1980: 25).”

From the figure 5 it is easy to identify the elements of AHP. The problem is to choose most suitable high school that meets the person’s needs. The goal is on the first level that is on the top. All criteria that are important when comparing the different options are on the second level. The number of criteria can vary. The different alternatives are on the last level. It is easy to draw a general picture of simple three level hierarchy from this example.

In figure 6 a basic hierarchy is presented. On the top of the hierarchy is the goal that is something one needs to reach. It can be for example buying a car or a smartphone. Criteria on the next level represent different elements that can be used in evaluating different options. They can be for example cost and style. The third layer is for the different alternatives that there are and that will be compared with each other based on the criteria.

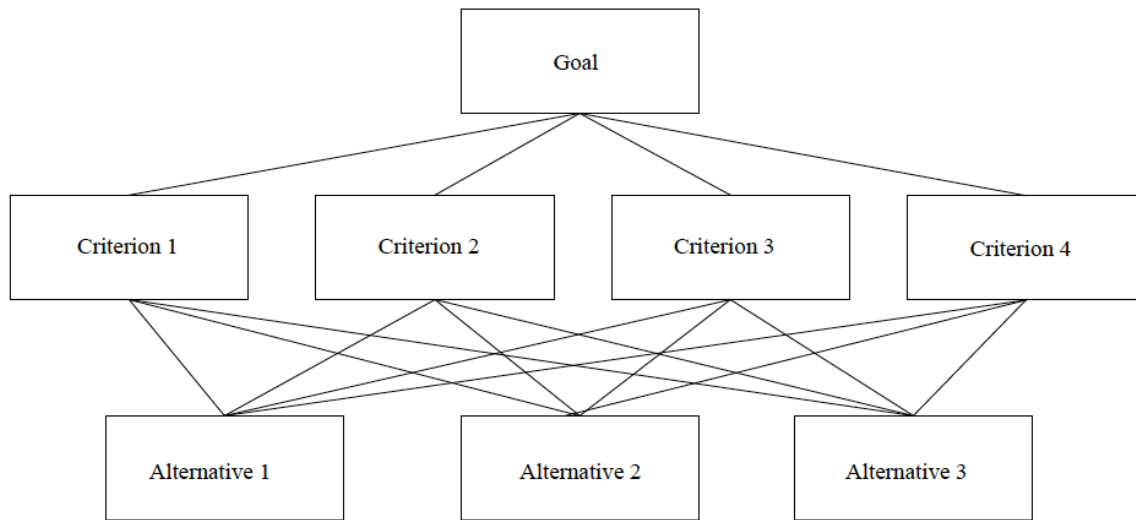


Figure 6. A three level hierarchy.

In table 3 one can see the scale of numbers and what they mean when doing the comparison between two elements. The numbers indicate how many times more important certain element is over another element that are being compared with each other. (Saaty 2008: 85.) Based on the hierarchy in figure 6 we can form a survey where we compare these different criteria as an example. The first three comparisons in the survey would look as following.

Criterion 1	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Criterion 2
Criterion 1	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Criterion 3
Criterion 2	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Criterion 3

In this example by choosing 1, one thinks that both criteria have equal importance. If one chooses 9 on the left side it means that one thinks criterion 1 has extreme importance when comparing with criterion 2. When one chooses 9 on the right side it means that criterion 2 has extreme importance over criterion 1.

Table 3. The fundamental scale of absolute numbers (Saaty 1990: 26).

Intensity of Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective.
3	Moderate importance	Experience and judgement slightly favor one activity over another.
5	Strong importance	Experience and judgement strongly favor one activity over another.
7	Very strong or demonstrated importance	An activity is favored very strongly over another; its dominance demonstrated in practice.
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation.
2, 4, 6, 8	For compromise between the above values	Sometimes one needs to interpolate a compromise judgment numerically because there is no good word to describe it.
Reciprocals of above	If activity $i$ has one of the above non-zero numbers assigned to it when compared with activity $j$ , then $j$ has the reciprocal value when compared with $i$ .	A comparison mandated by choosing the smaller element as the unit to estimate the larger one as a multiple of that unit.
Rationals	Ratios arising from the scale	If consistency were to be forced by obtaining $n$ numerical values to span the matrix.
1.1-1.9	For tied activities	When elements are close and nearly indistinguishable; moderate is 1.3 and extreme 1.9.

Example matrix has been described by Saaty (1980: 19–20) that examines the scale of brightness between four chairs that are next to each other. An individual will be interviewed who is standing next to the chairs. The person will compare each chair to another. Based on the answers a pairwise comparison matrix will be filled in. For example, if the person thinks that A and B are equally important the value inserted to matrix is 1.

After all chairs has been compared to each other the matrix has to be filled with reverse comparisons that are reciprocals from the values that has been already filled in based on the interview. If the person filled number 7 for position (A, D) then the reciprocal value is  $1/7$  and it will be inserted in position (D, A). (Saaty 1980: 17–19.) Example of complete matrix can be seen in figure 8.

Brightness	A	B	C	D	Priority
A	1	5	6	7	0.61
B	$\frac{1}{5}$	1	4	6	0.24
C	$\frac{1}{6}$	$\frac{1}{4}$	1	4	0.10
D	$\frac{1}{7}$	$\frac{1}{6}$	$\frac{1}{4}$	1	0.04

Figure 7. Example matrix. (Saaty 1980: 19–20.)

The next step after the matrix has been created is to get priorities for each option. This is done by calculating principal eigenvector and normalizing it. The result is vector of priorities. There are multiple ways to do this and Saaty (1980: 19) introduces four different ways which can be used. The method that is used in this thesis has been labelled as good by Saaty and is called eigenvector method. (Saaty 1980: 19.)

### 3.3 Consistency

Consistency index (C.I.) is index that will give information how consistent the comparison is. It can be calculated by using equation presented next.

$$C.I. = \frac{(\lambda \max - n)}{(n-1)}, \quad (1)$$

where  $\lambda \max$  = principal eigenvalue and  $n$  = the number of criteria. (Saaty 1980: 21.)

The closer  $\lambda \max$  is to the number of the criteria that are being compared, the consistent the outcome is. (Saaty 1980: 21.)

Random index (R.I.) is appropriate consistency index that can be used as a comparison for C.I. It is randomly generated matrix with scale 1/9, ..., 1, ..., 9. In table 4 we can see the values for R.I. depending on the order of the matrix which is presented as  $n$  in the table. (Saaty 1980: 21.)

Table 4. Random index (R.I.). (Saaty 1980: 21.)

n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
R.I.	0.0	0.0	0.5	0.9	1.1	1.2	1.3	1.4	1.4	1.4	1.5	1.4	1.5	1.5	1.5
	0	0	8	0	2	4	2	1	5	9	1	8	6	7	9

Consistency ratio (C.R.) would be then calculated by dividing consistency index with random index. The equation for this is presented next.

$$\text{C.R.} = \frac{\text{C.I.}}{\text{R.I.}} \text{ (Saaty 1980: 21.)} \quad (2)$$

Acceptable value for C.R. is 0,10 or less. Everything above that is thought to be not acceptable. (Saaty 1980: 21.)

### 3.4 Correlation

In order to analyse if two elements are related to each other we need to find out their correlation. It is measured with correlation coefficient which contains the value of how strongly the two elements are related. Letter  $r$  is usually used for correlation coefficient. It can have values between values -1 and +1. (Saunders, Lewis & Thornhill 2007: 450–451.)

If the correlation coefficient is 0 it means that the elements are not related to each other so there is no correlation. Values close to -1 and +1 means that the elements have perfect relation. If the value is +1, positive, it means that the elements have direct relation and with -1, negative value, they have inverse relation. Positive correlation means that when one element's value increases, so does the other element's value. Negative correlation means that when one element's value increases, the other element's value decreases. (Saunders et al. 2007: 450–451.) Pearson correlation coefficient will be used in this thesis. The equation used to calculate the value is presented next.

$$r = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i (x_i - \bar{x})^2} \sqrt{\sum_i (y_i - \bar{y})^2}} \text{ (Microsoft 2017.)} \quad (3)$$

## 4. RESEARCH METHODOLOGY

### 4.1 Quantitative research

Quantitative research is one of the research methods which aim to create a picture of the variables that are being measured including their relations and differences. Method answers questions like how much, how many or how often. Information is investigated numerically which means that the investigated topic is being described by numbers. Research data is numerical or qualitative data that is grouped into numerical form. Results are presented with numbers and they are being interpreted and explained verbally. (Vilkka 2007: 13–14.)

Research can be implemented in qualitative or quantitative research method. Quantitative research differs from qualitative research mostly in two topics; choosing the people to interview and what kind of questions are used. In qualitative research the persons are chosen by certain criteria and the amount of people who will be interviewed is small. In quantitative research the number of respondents is larger and the persons are usually random. The questions asked from the persons also vary as in qualitative research the questions are based on certain theme and the questions are open. In quantitative research the questions are structured. (Statistics Finland 2016a.)

Statistics Finland (2016a) defines quantitative research to have the following aspects.

- Interviews are based on random selection.
- Research includes critical phases which prevent one to go back to the previous phases.
- Research always has numerical material.
- The truthfulness of the material gathered is important. (Statistics Finland 2016a.)



Quantitative research is objective which means that the researcher is impartial. The research result is objective when it is independent of the researcher and the researcher doesn't affect the result with own background and beliefs. Objectivity can be separated in two different areas: research process and impartiality of the results and interpretation of results. (Vilkka 2007: 13–16.)

The first one is supported by the fact that researcher and respondent have a distant relationship during the research. For example, if the survey is created as an online survey, the respondent will never meet the researcher. The second area, interpretation of results, means that the results are being investigated with certain framework outside the research itself. This means that the interpretation will be affected by the theories, models and earlier research in the field. Results can be interpreted in many ways as it depends on which framework is chosen to be used in the research. (Vilkka 2007: 13–16.)

Quantitative research method was a natural choice for this research as it is based on survey that will give numerical results which will be investigated. The research has also some elements from qualitative research. Example of this is that the groups to whom the questionnaire was sent to, was chosen based on certain criteria and the number of respondents was not large as it is usually with quantitative research.

## 4.2 Case study method

Case study method examines one or multiple cases. Its main goal is to define, analyse and create a solution for the case study subjects. This is the reason why in case study it is never obvious how the subject to be examined is selected, limited and justified. Case studies typically explores phenomenon that depends on time, place or some other criteria that can be for example event, individual or group. Qualitative data is typically used in case studies

but quantitative data can be also used. In case studies, different data analysis method can be utilized. (Eriksson & Koistinen 2014: 4–5.)

Eriksson and Koistinen (2014:5) have listed four cases where case study method can be utilized.

- Questions what, how and why are central.
- The researcher has little control of events.
- Some empirical research has been done on the subject, but not much.
- Object of the research is phenomenon from current life. (Eriksson & Koistinen 2014: 5.)

Approach of case study method is often contextual. This means that a case that is being explored is understood as a part of specific environment. Context forms the environment for the research subject that can be defined in various ways. Context can be formed from the historical background of the subject, cultural environment, industry or political situation within where the subject works. (Eriksson & Koistinen 2014: 7.)

### 4.3 Data collection

Quantitative data is used in this research that has been collected by researcher Stiina Vistbacka for her dissertation from a pre-study questionnaire. Vistbacka has created the questionnaire and collected the data herself which means that all the decisions are done by her. These decisions include the career events chosen, creating the questionnaire and choosing to whom the questionnaire was sent to. As AHP method has been chosen as an analysis method, it also creates certain demands for how the data must be collected. That is the main reason why questionnaire has been chosen as a data collection method.

Questionnaires works best in cases when one has standardized questions that are easy to understand. In cases where one has lots of open questions, questionnaire might not be the best option. Questionnaire can be used for descriptive or explanatory research. The former is describing more the characteristics of phenomena and latter is explaining the relationship of the element being investigated. (Saunders et al 2007: 356.) In this thesis we are using the questionnaire for explanatory research.

Self-completion questionnaires are created by using Internet and respondents will complete them by themselves. These questionnaires are called Internet-mediated questionnaires. One benefit of using questionnaire is that there is no interviewer who could e.g. lead the respondent to respond in certain way or make respondent uncomfortable. Though there are disadvantages. When there is no interviewer present, there is a chance that respondent might misunderstand a question and is not able to check it with anyone. (Saunders et al 2007: 356; Brace 2008: 29.)

When the questionnaire link is being sent by mail, one can be sure that the correct person has answered it. As if anyone can answer the questionnaire, one can't be sure who they are and if one even wants them to answer. It is easier to send the questionnaire to larger number of respondents and if one is doing face-to-face interviews, the amount is less as they will take more time. (Saunders et al 2007: 358.)

#### 4.3.1 Questionnaire layout

As AHP was chosen to be used as an analysing method of the results, it was clear that the data had to be collected using a questionnaire. The aim is to find out which are the career events that will support in the leadership development. In order to format the questionnaire, the elements for comparison had to be chosen and the hierarchy designed. These elements are those career events.

In table 5 the different events are presented. They are based on Gary Yulk's events presented in the chapter two where theoretical framework was introduced. Only certain events were chosen to be used in the questionnaire as the research method AHP has a limit with variables that can be used. Eleven different events got chosen.

Table 5. Career events chosen for the questionnaire. (Vistbacka 2015.)

<b>Event number</b>	<b>Event name</b>	<b>Description</b>
C1	Change of job	Changing to a position in completely different organization.
C2	Change in the content of work	A change of the content of work and the change of responsibility area, job and task rotation.
C3	Responsibility for process of change	For example starting reforms, operational changes.
C4	Reorganization of operations	For example downsizing decision, changes related to structure or resources.
C5	Externally challenging situations	For example working in a foreign culture, crisis, and public pressure.
C6	Management training	Training, short and long programs.
C7	Results of 360 evaluation or similar feedback program	Feedback from 360 evaluation or other feedback from the organization that is related to management such as the Working Life Barometer.
C8	Sparring with the superior	Sparring with our own superior including development discussions.
C9	Coaching or mentoring	Personal development process.
C10	Self-studying	For example reading literature related to management or networking.
C11	Other, what?	Situation or event that has not been mentioned in the survey, asked to define in brief.

Stiina Vistbacka (2016a) has made the decisions on which events will be chosen to be part of the questionnaire. Based on Stiina's decisions, she has divided the events for different groups in the following way by using Yukl's way of grouping events.

The first five events belong to Yukl's group learning from experience. (Yukl 2013.) The events are

- Change of job
- Change in the content of work
- Responsibility for process of change
- Reorganization of operations
- Externally challenging situations.

The next group is called developmental activities (Yukl 2013), which contains the following three events:

- Results of 360 evaluation or similar feedback program
- Coaching or mentoring
- Sparring with the superior

Leadership training programs (Yukl 2013) has one event that is Management training. There is one event in self-development (Yukl 2013) category that is Self-studying. The last event called "Other, what?" is event that can belong to any of these groups regardless of the respondents.

Based on the identified events, hierarchy for this research problem can be drawn. The hierarchy is presented in figure 8. The questionnaire has been created based on this hierarchy and the idea has been that all the 11 different events will be compared with each other. The questionnaire can be found in the appendix 1 that is the version that has been

freely translated from Finnish to English. In appendix 2 the original questionnaire in Finnish is found. Questionnaire was created in Internet by using E-lomake service. The direct link was then included in the mail that was sent to the chosen groups of respondents. An example of a question that is included in the questionnaire is following:

Change of job    1   2   3   4   5   6   7   8   9   8   7   6   5   4   3   2   1    Change in the content of work.

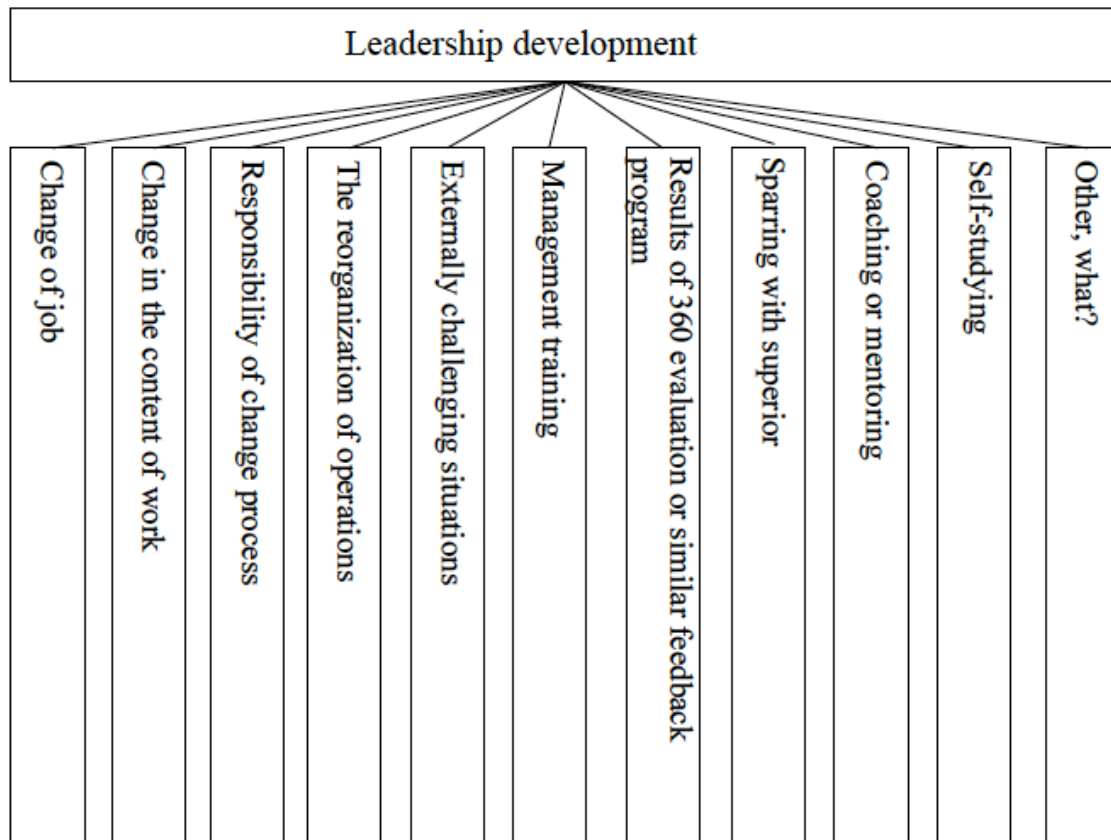


Figure 8. Hierarchy with the most important events.

In addition to the comparison questions, questionnaire included questions of the respondents' background information. The information that was asked was related to gender, age, education, current occupation and how many years the respondent had been working in the current position. (Stiina Vistbacka 2016c.)

#### 4.3.2 Respondents

The target group for this research is previously defined by Stiina Vistbacka. The research concentrates on specific experts in the medical field in Finland. Stiina Vistbacka (2016c) had created two groups of respondents who were selected to be part of the research and who received the questionnaire. These two groups were formed with specific criteria. The first group contains 24 persons who had been selected with separate method by Vistbacka herself. The second group contains 36 persons who had completed a specific leadership training that had been organized in the organization. All together there were 60 persons who had been chosen to be part of the research and the pre-study questionnaire was sent to them. All the persons are leaders in the organization; majority is from the middle management and some from the top management.

#### 4.4 Validity and reliability

Validity indicates how well the chosen research method measures the phenomenon what it is supposed to measure. Research is valid when it doesn't include systematic error. Reliability indicates how reliable the research is which refers to the stability of the results. This means that the research can give non-random results for example when the interviewer, timing and conditions are different. This can be evaluated with re-measurements, internal consistency or setting up questionnaire in different way. (Statistics Finland 2016b; Vilkkä 2007: 177–79; Statistics Finland 2016c; Saunders et al. 2007: 368.)

When investigating the reliability of research, the things related to measurement itself and the accuracy of the implementation of the research is being evaluated. Evaluation includes for example the following topics:

- How successfully the sample group is representing the population (size of sample group and quality)?
- What is the response rate?
- How carefully is the information related variables entered?
- What kind of measurement errors (questions in the questionnaire or response options) the research includes? (Vilkka 2007: 150.)

Validity can be separated to internal and external validity. Internal validity measures the reliability of the research itself. Does it measure what it is supposed to measure? There is a challenge with this as researcher doesn't know exactly what the reality is. In order to overcome this challenge, researcher has to find out other supporting proof. External validity measures if the research is generalizable. This means that for example the research could be utilized in a different organization and it can still get valid results. (Saunders et al. 2007: 151, 367.)

Validity can be evaluated for example by using the following questions:

- How the content and design of questions and response options has succeeded (researcher and the respondent have to understand the questions in the same way)?
- What kind of inaccuracies the method has? (Vilkka 2007: 150.)

Reliability of this research is good. The data has been collected by using questionnaire and respondents have answered it by themselves in different environments. The questionnaire could have a different form, meaning that the comparisons could be in another order but still the content would be the same that needs to be answered. The questionnaire can be



redone and still have valid responses. As the questionnaire didn't force respondents to answer all questions, they were able to leave some questions unanswered which are affecting the reliability of the responses overall. In order to keep the reliability of this research in good level, those incomplete responses were removed totally. Also the respondents that didn't answer all the questions were not part of the overall results.

Validity of this research is also good. The research questions can be answered by utilizing the results of the questionnaire. The information that Stiina Vistbacka (2016c) has gathered from her individual interviews with some of the respondents are also supporting the analysis of the research problems. As one of the research problems is to identify elements that are having impact on leadership development, this same research could be conducted in completely different industry and it would still work and give relevant results within that industry. This research is not specific for healthcare industry. Research is also objective as the researcher is impartial.

## 5. EMPIRICAL RESEARCH

The AHP method has been used to analyse the responses. Based on the outcome different graphics has been made to visualize the results. First the overall results and the prioritization is presented. After that we will look into the results based on the occupation. In the end these results will be compared.

30 responses were received for the questionnaire which means that the response rate is 50,85%. This is acceptable as there are enough answers to be able to make analyses. As AHP method had been chosen to be used, 8 answers had to be removed as those respondents had not answered all questions. It was decided to remove the incomplete answers since AHP method can't be used if all questions are not answered. In this thesis we will concentrate to investigate those 22 respondents and their answers.

The last option "other, what?" was also removed as many respondents didn't answer it or if they had answered, they didn't explain towards what event were they comparing the event to. It was also affecting the AHP method as when using the method all questions should have an answer. Once all the answers had been gone through it was right away clear that the last option needed to be left out.

The original idea was to use two different groups of the respondents and compare their results to each other. Unfortunately, when the questionnaire template was created, there was not a question that could have helped in identifying to which group the person belonged to. According to Vistbacka (2016c) the profiles of the persons in both of the groups are really close to each other and the size of the sample justify combining the groups in the analysis phase. This is the reason why the results will be handled as a one group in this thesis.

### 5.1 Background information of respondents

Background information of the respondents was gathered as a part of the questionnaire. The information that was asked was gender, age, education and work experience in years in the current position (Stiina Vistbacka 2016c).

In figure 9 the distribution based on the occupation is presented. Mostly the respondents are either doctors or healthcare workers as they cover 77% of all the responses received. Only two special employees and three other personnel have answered. The focus of analysing the results will be the whole group but also the comparison of results between doctors and healthcare workers. The results of other personnel and special employees will not be compared to each other as the amount of answers is not enough in order to do valid comparison.

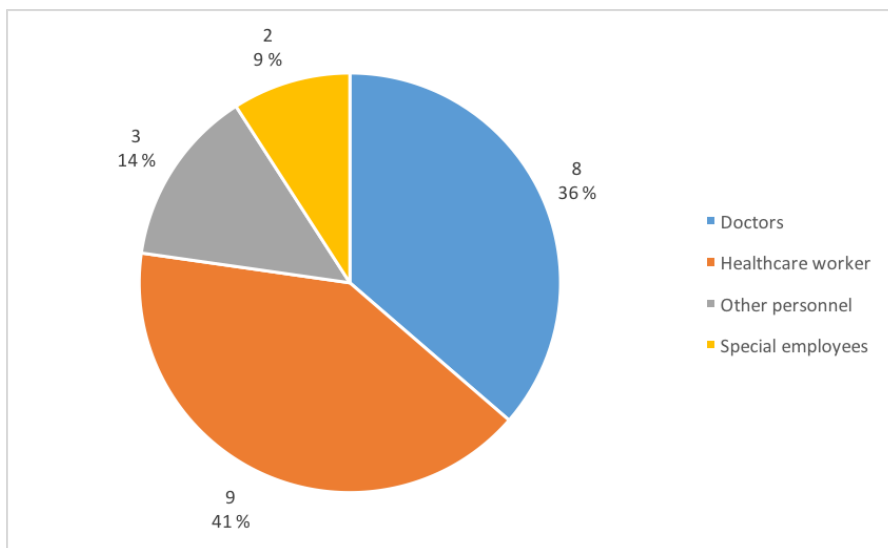


Figure 9. Distribution of occupations of respondents.

The distribution of gender of each respondent is presented in figure 10. The distribution of gender is almost fifty-fifty; there are just few women more than men who have participated in the questionnaire. These 14 women include respondents from each occupation and for example all the healthcare workers are women as seen in figure 11 and figure 12. Within the men all other occupations are represented except healthcare workers as seen in figure 12. The distribution among doctors is two women and six men. Based on these numbers we can conclude that there is no reason to do any comparison based on the gender in different occupations as we do not have enough answers for all genders and occupations.

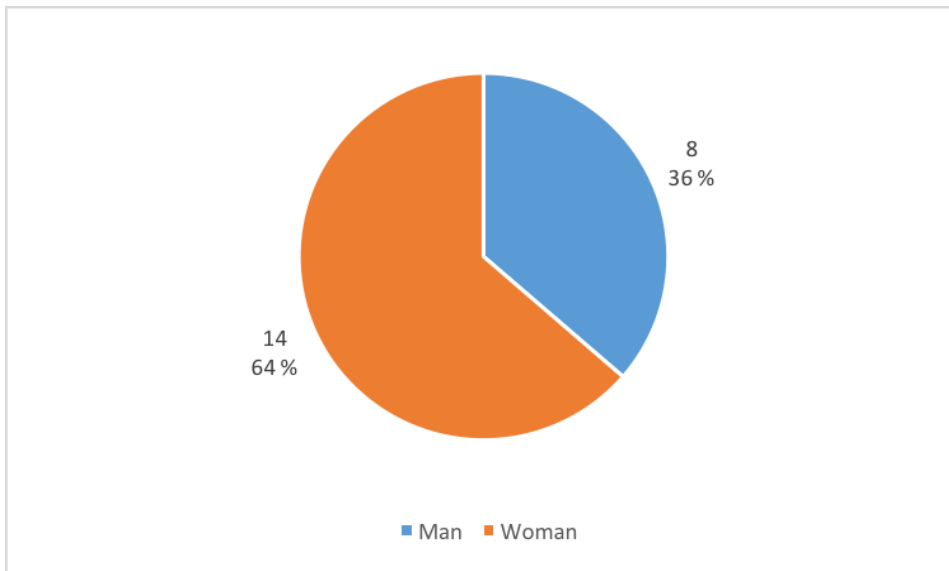


Figure 10. Distribution of respondents based on gender.

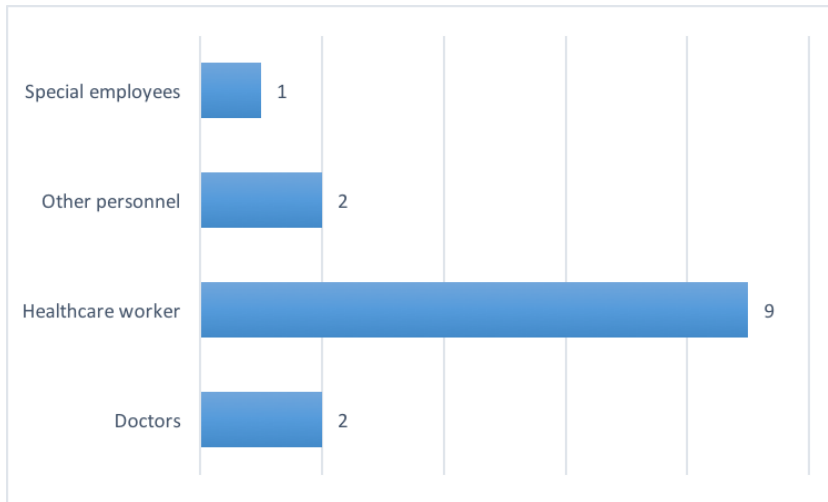


Figure 11. Distribution of occupations among women.

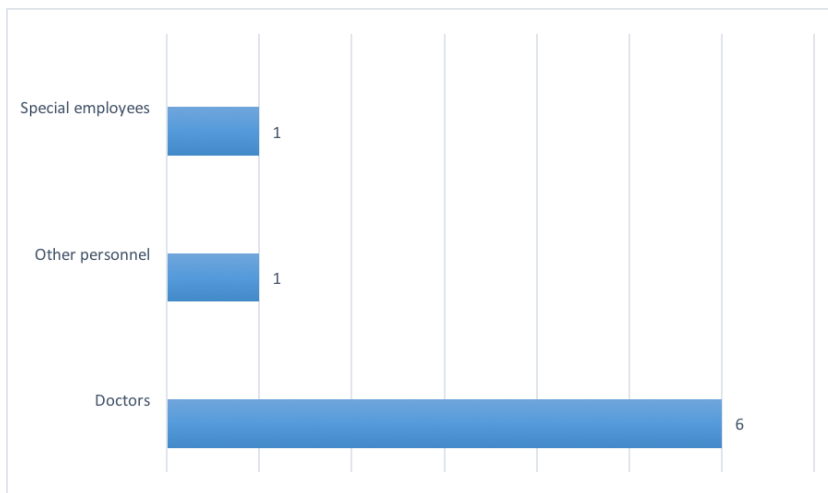


Figure 12. Distribution of occupations among men.

The distribution of the age is presented in figure 13. The distribution looks almost like the normal distribution. Many respondents are between age 46 and 60 and only few are either younger or older than that.

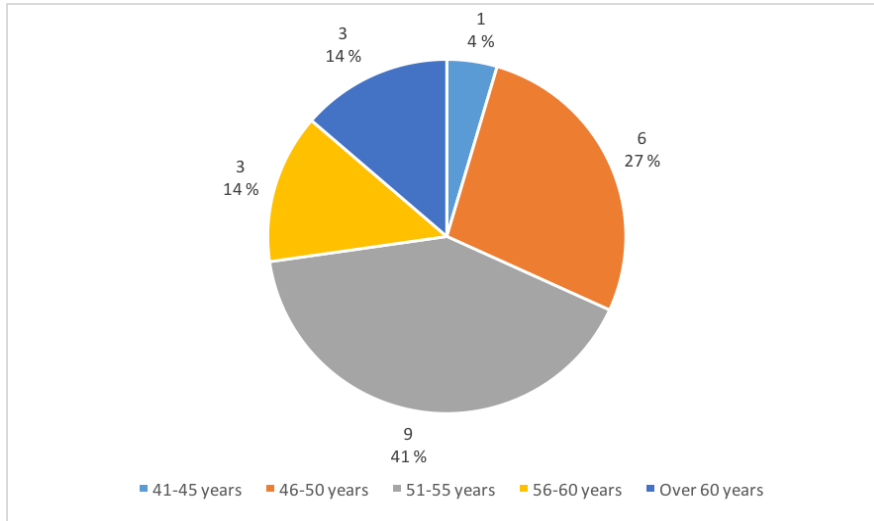


Figure 13. Distribution of ages of respondents.

In figure 14 the distribution of education is presented. Over half of the respondents have master's degree which is required for the work. Almost a quarter of the respondents have doctoral degree which is also common within doctors as they even might have to do it in order to go forward in their career. Only two respondents had lower education than master's degree.

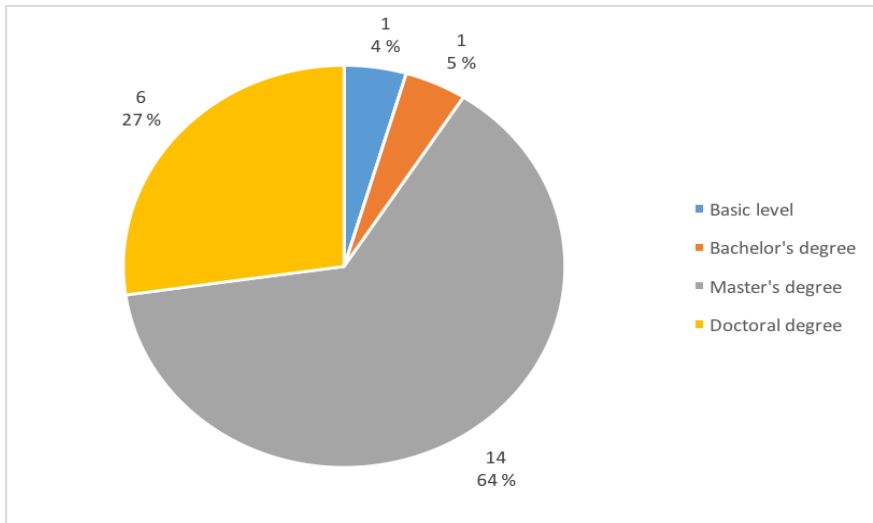


Figure 14. Distribution of education of respondents.

According to Vistbacka (2016c) it seems that some of the respondents have not answered carefully in the education question. Based on the existing requirements for occupations and the interviews Vistbacka (2016c) has made, it is clear that the amount of doctoral degrees is more than six. Also one respondent has answered that the education level is basic level which isn't correct. All the respondents have specific education as the hospital district is requiring the employees to have one. So it can be assumed that question about the education has not been answered correctly in this case and the results showed in figure 14 are not reliable.

In figure 15 the work experience of respondents is presented. The work experience in this case means the years the respondent has been working in specific hospital or medical care unit. As one can see from the figure almost all the respondents have been working over 10 years and only two has less years of experience. As the work experience is the same with almost all respondents, there is no reason to analyse the results based on this factor.

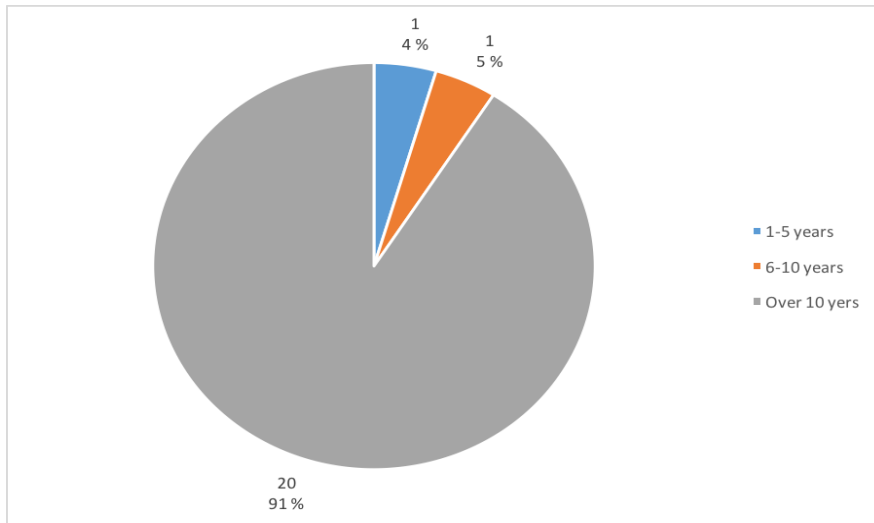


Figure 15. Distribution of work experience of respondents.

## 5.2 Overall results

Overall results of the whole group will be presented in this chapter. Different angles are being used in order to identify the prioritization. Results will be analysed based on occupation, age, work experience and gender. Education will be left out of the overall results as the responses are not reliable. Since respondents had not replied to the question about their education in correct way, the results are not correct nor reliable.

### 5.2.1 Occupation

The distribution between all the different events based on the certain occupation can be seen in figure 16. Among doctors there are few events that are clearly more important than others. They are C3, C5 and C8. These are responsibility for process of change, externally challenging situations and sparring with the superior. Among healthcare workers there are



two clearly important factors that are pointing out. They are C2 and C6; changing the content of work and management training.

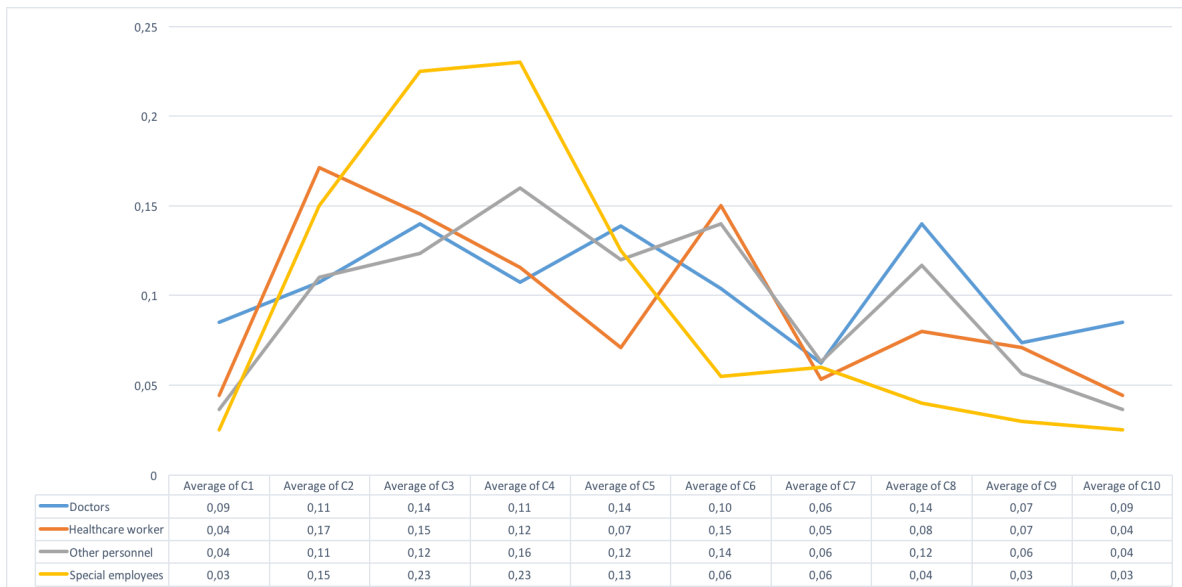


Figure 16. Weights of events based on occupation.

Among other personnel C4, C6 and C8 points out the most. These are the reorganization of operations, management training and sparring with the superior. Among special employees the most important factors look like to be C3 and C4. These are the responsibility for process of change and the reorganization of operations.

Responsibility for process of change, management training and sparring with the superior (C3, C6 and C8) arise strongly in every occupational group although they are different from each other. It can be said that the tools that can be used for developing as leader are seen to be events where one can utilize help from more experienced persons and by having responsibility in the form of bigger project. These all events belong to different groups based on Yukl's theory. The first one, responsibility for process of change, belongs to

learning from experience. The management training is part of leadership training programs. The last one, sparring with the superior, is part of developmental activities.

An interesting observation in the results is that the externally challenging situation is one of the least effective events in the career for healthcare workers when comparing with doctors. Doctors see it as a variable that has helped them to develop as a leader but healthcare workers feel that its value isn't as high as what doctors feel. This is certainly supported by the fact that different professional groups have different content of the work even though the position of being a leader would be comparable. It could be so that doctors have had the opportunity to go for externally challenging situations that could be for example being in charge of crisis situations. Maybe healthcare workers are not having the same role in those situations and doctors are taking the leadership role easier.

Results also indicate that different development events work in a different way for persons who are having different occupation. For some a certain event works in a good way as at the same time for someone else it doesn't. This is explained by the nature of the tasks and by the fact that in this field people value the know-how that older and more experienced workers have. They can themselves utilize their information in their development.

Regardless of the occupation, it can be said that C1, C7 and C10 are variables that are seen as the least effective events of development among all respondents. These variables are change of job, results of 360 evaluation or similar feedback program and self-studying. This indicates that these events have not been used much by the respondents or then the benefit of using these has been low. These are also from the same groups as the events that were seen the most effective ones. Based on this it can't be said that some group of events are least effective than others among the different occupation.

### 5.2.2 Age

Results sorted by the age of the respondents are presented in figure 17. There was only one respondent with age between 41 and 45 years old so that will not be considered. Persons under 50 years old seem to prioritize C2, C3 and C4; change in the content of work, responsibility for process of change and reorganization of operations. This indicates that in order to develop one needs to have opportunities where can handle situations that include change. Changing own content of work could be meaning that the person is taking that kind of tasks that will teach relevant skills that are needed in other positions which need more experienced background.

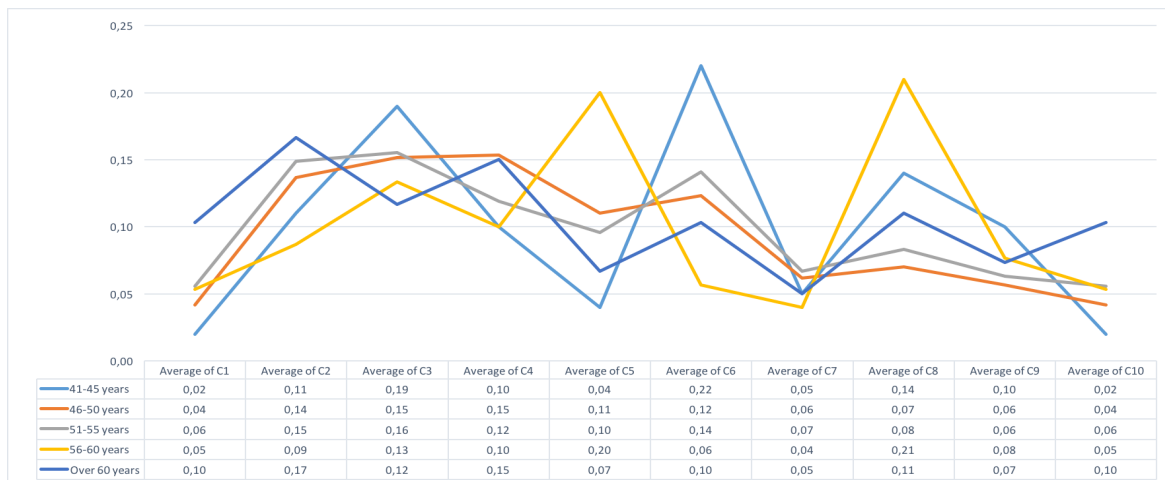


Figure 17. Weights of events based on age.

C2, C3 and C6, change in the content of work, responsibility for process of change and management training, are events that raises within the persons who are between 51 and 55 years old. First two events are the same that persons under 50 have identified to be effective ways of development. Management training had been conducted to a specific group of people. As the event is raised quite high within this age group it could indicate that they

have been participating in those trainings. Most probably the persons under 50 years old think that training and the development itself are part of the work when older persons value the training and education as an event that isn't taken for granted.

Persons in the age group from 56 to 60 years have two events that are popping out from all the others. These events are C5 and C8; externally challenging situations and sparring with the superior. This age group is having totally different events on the top when compared to the previous groups. This could mean that in this point of the career when you are almost close to 60, one doesn't feel that one can develop anymore through the work itself, as that has been before most probably the way of doing it.

The development in that age group is more about experiences from crisis situations or from period of working abroad. It is not clear at which point in the career these have been identified to be most effective. Overall it can be said that in order to become better leader, one needs to have challenging situations where one has to work under pressure and under new and unknown circumstances. Real situations are the best cases to learn from and become better.

The last group is over 60 years old and basically persons who are close to retirement. Two events pop out here as well: C2 and C4. These are change in the content of the work and reorganization or operations. Only one age group had different answers than these. This indicates that it doesn't matter what the age is, persons still see that similar events are the key to development and in this case those events include change in own work somehow. There was not huge variety of the respondent's ages as they are all almost the same age.

The change that one could do themselves is for example to take more responsibility from other areas that are not known to the person or even look opportunities outside work life to have responsibilities that support one's development of leadership. One could for example be chairman of some sport organization. Other events are about having the responsibility of

change or changing way of working inside the organization. So when one has to implement something new or create something new that is not yet known, those are the key topics for development.

There is one event in figure 17 that all the age groups have identified to be least important or least effective. This is C7, results of 360 evaluation or similar feedback program such as Working Life Barometer. This is explained by the fact that not everybody inside the respondents has had a chance to participate in 360 evaluation as it has not been yet largely implemented in the organization. It is available for everyone but it seems that these kinds of feedback programs are not yet fully utilized even though the Working Life Barometer is done yearly for everyone. (Vistbacka 2016c.)

### 5.2.3 Work experience

Results sorted by years of working in the current workplace are presented in figure 18. As everyone else than two respondents have experience over 10 years this comparison based on the years are not reliable to do as we do not have enough responses from each group. Even though we can see from these results that there are different elements that are important based on the working experience, we are not able to generalize it as there is only one answer behind one of the two groups.

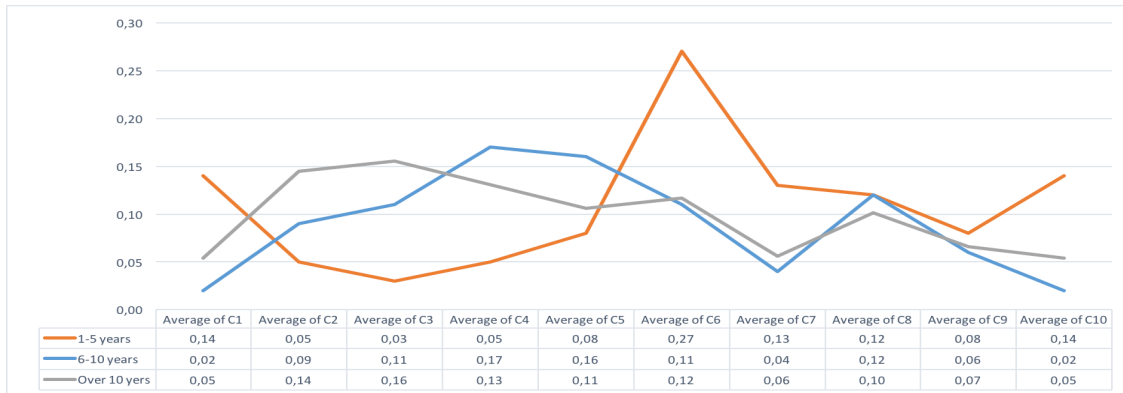


Figure 18. Weights of events based on work experience.

## 5.2.4 Gender

Results sorted by the gender of the respondents are presented in figure 19. When the responses are distributed between men and women, it can be seen that both genders share relatively similar ideology when ignoring other background factors. The uniformity of responses is clear except for few variables which are stressed high by men unlike women and vice versa. These variables are clearly change in the content of work and externally challenging situations. Women emphasize the change in the content of work and men externally challenging situations.

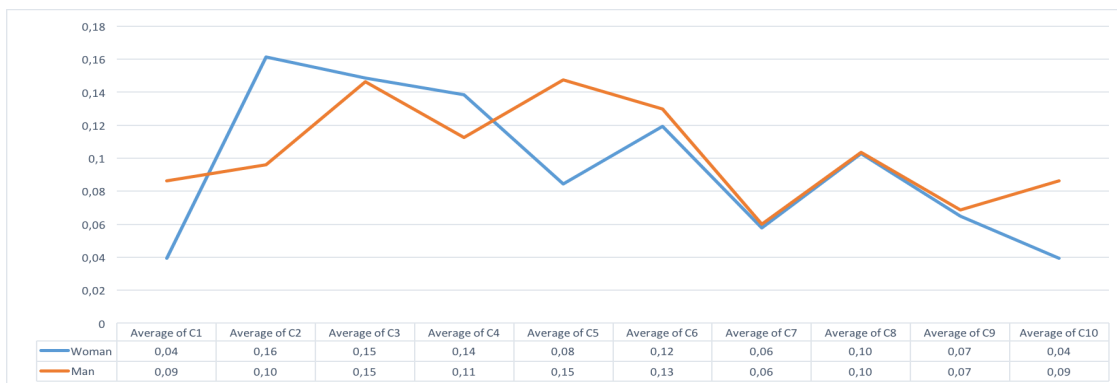


Figure 19. Weights of events based on gender.

### 5.2.5 Prioritization of the events

Priority order for the events can be done by using both arithmetical average and geometric mean for the weight values that has been calculated with AHP. In accordance with the weight values we get priority order by using arithmetical average. The prioritization based on it can be seen in table 6.

Table 6. Prioritization using arithmetical average.

Priority	Event name	Priority vector
1	C3 Responsibility for process of change	15 %
2	C2 Change in the content of work	14 %
3	C4 Reorganization of operations	13 %
4	C6 Management training	12 %
5	C5 Externally challenging situations	11 %
6	C8 Sparring with the superior	10 %
7	C9 Coaching or mentoring	7 %
8	C7 Results of 360 evaluation or similar feedback program	6 %
9	C10 Self-studying	6 %
10	C1 Change of job	6 %

The prioritization is being calculated also by taking geometric mean from all answers. The prioritization based on that can be seen in table 7.

Table 7. Prioritization based on geometric mean.

Priority	Event name	Priority vector
1	C3 Responsibility for process of change	18.07 %
2	C4 Reorganization of operations	14.09 %
3	C2 Change in the content of work	13.75 %
4	C5 Externally challenging situations	10.56 %
5	C6 Management training	10.15 %
6	C8 Sparring with the superior	9.58 %
7	C10 Self-studying	6.71 %
8	C9 Coaching or mentoring	6.50 %
9	C7 Results of 360 evaluation or similar feedback program	5.72 %
10	C1 Change of job	4.88 %

When comparing tables 6 and 7, one can see that the priorities are basically the same regardless which method has been used to calculate it; arithmetical average or geometric mean. We will use the results from the latter method to represent the priorities. The consistency ratio when using geometric mean is 0,014332325. Based on the theory the acceptable value is  $< 0,10$ . In this research the CR value is acceptable and the evaluation of the prioritization is consistent in the whole group.

The top three prioritized events are responsibility for process of change, reorganization of operations and change in the content of the work. These all are part of Yukl's learning from experience group. The same events popped up while looking at the results based on different aspects for example occupation and age. Vistbacka's (2016c) interviews also support this as one of the discussion topics was the change in the content in the work. In many cases this has been the career path that has taken one from different positions to another which has created good learning opportunities.

As already mentioned in the analysis of the overall results, this indicates that persons who want to develop as a leader, see that situations, that include some kind of change, are the most effective ways to develop. This could mean that one takes new responsibilities inside



and outside work. One could also be responsible for implementing organizational change or new process that is in use inside own organization. All these are based on real work and real experience that one receives by doing.

The last three events in the prioritized list are coaching or mentoring, results of 360 evaluation or similar feedback program and change of job. The first two events are part of Yukl's group development activities and the last one is part of learning from experience. Results of 360 evaluation or similar feedback program has the second lowest prioritization and it is not identified as an event that helps one to grow in the field of leadership. Based on the interview with Stiina Vistbacka (2016b) one reason for this is that the usage of this evaluation is not yet systematically in use and it has been used now mainly part of certain trainings.

This would explain the priority of this element as not many have used this evaluation. Even though the evaluation is not systematically in use, there is an opportunity in the organization to be able to have it done for oneself. It might be so that people don't yet know that it is available or they haven't had time to take it. Working Life Barometer is also included in the question and as a part of the survey there is the evaluation of the immediate manager and the abilities of the manager. Barometer is used yearly so the feedback for leaders should be received from it every year.

The 360 evaluation theory seems to be useful to be used in all kind of development and if this method is used more in the future, the importance might also get higher when having chance to utilize the results. Though it can be also said that as this kind of surveys already exists and are used, persons see that they are beneficial and provide information that one can utilize in own development plan. So it is still good way to gather input, but it is not the best event to get the understanding of how to develop.

Change of job is the least important and effective method. This might indicate that only few in the group had changed the employer organization meaning that many had worked their whole career inside the same organization and just maybe changed positions inside there. It also indicates that it is not necessary to change the job as it might be that the work itself is completely similar elsewhere than what one is having already. Most probably the aspects of the healthcare industry also affect this as usually persons are staying in one organization based on their specialization. So they are not changing organizations as they might not be able to utilize their knowledge anywhere else.

Management training is located in the middle of the events. Stiina Vistbacka (2016b) explains that superiors within both healthcare workers and doctors have had management trainings for a long time already as they are part of the education. Doctors are doing work that is based on substance knowledge but there is now more need for leadership and its development within that occupation as well. These management training programs aren't new thing among doctors and it has been part of their education at least for the last 10 years. Doctors are also nowadays interested more and more of the opportunities of leadership development and see it as a valuable event for developing. (Stiina Vistbacka 2016b.)

Vistbacka's (2016c) interviews are supporting these results but some of the events are having lower priority than would have expected based on the interviews. For example, in almost every interview sparring with superior was mentioned as an important event. It is in the middle in the overall prioritization list. Also the self-studying is part of the least effective events and this could be because studying is part of daily work in this industry and it is not seen as a separate method.

### 5.2.6 Statistical values

Different statistical values have been calculated from the responses. Geometric mean has been calculated from all the responses on event level. The results can be seen in figure 20. After that standard deviation is calculated and visualized in figure 21. Coefficient of variation is presented in figure 22 which can be calculated by using the results from these two earlier calculations.

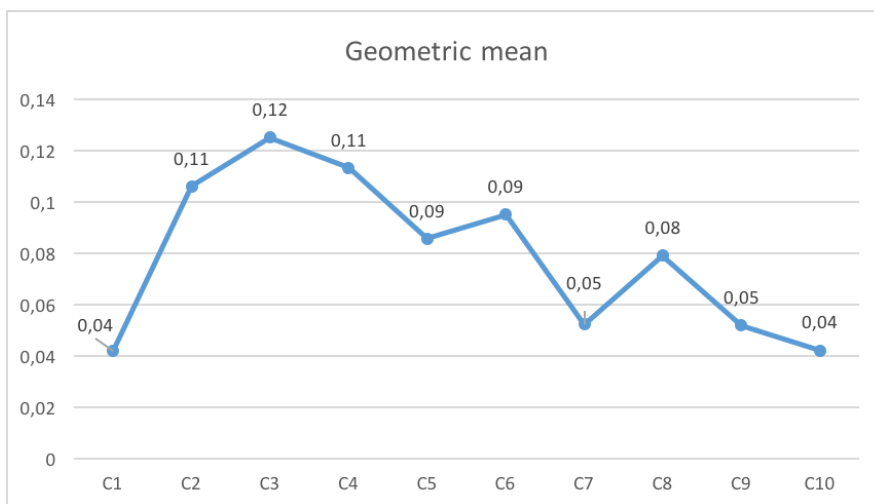


Figure 20. Geometric mean of all the responses based on each event.

Standard deviation explains how far away the responses are from the mean value. As seen in the figure 21 the standard deviation for each event is low which means that the responses are all close to the mean value.

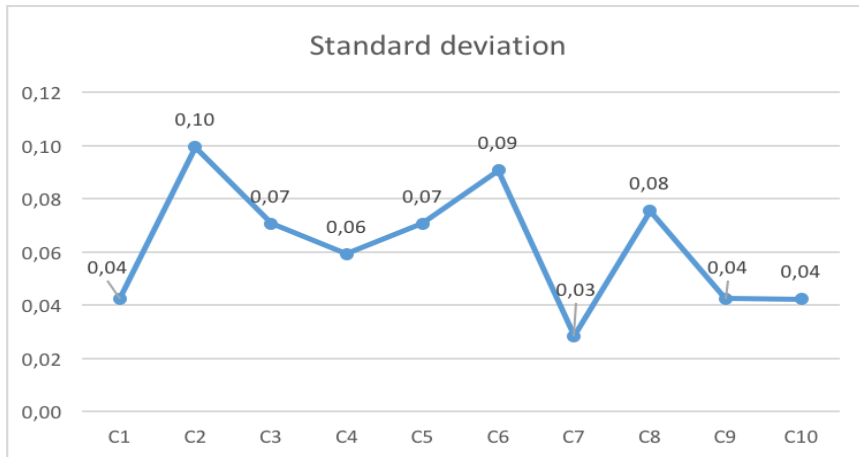


Figure 21. Standard deviation of the events.

Coefficient of variation can be calculated by using mean and standard deviation. The results can be seen in figure 22. Coefficient of variation visualizes the dispersion of variables. The smaller the value is, the lower the dispersion of the values inside the element is. Good value for coefficient of variation is below 1 which in this case means that all the elements are having a good value.

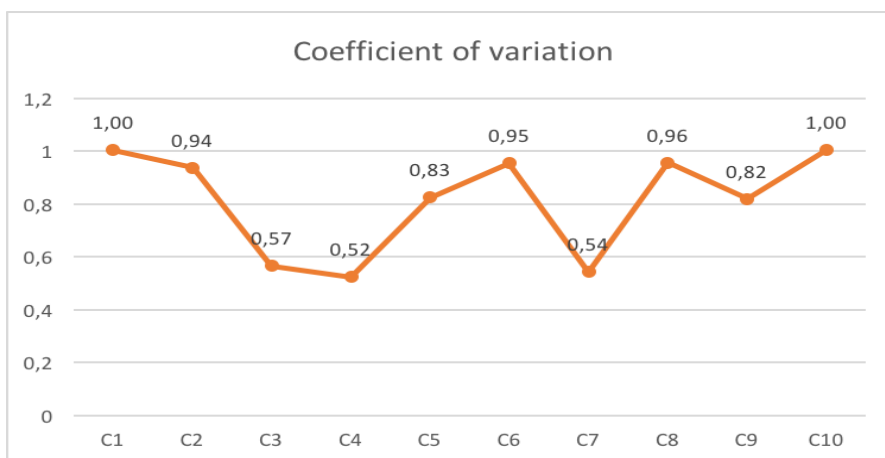


Figure 22. Coefficient of variation.

### 5.2.7 Correlation

In table 8 the correlation between each event has been calculated.

Table 8. Correlation between events.

Correlation	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
C1	1.00	-0.24	-0.36	-0.34	0.18	0.29	-0.08	-0.08	0.02	1.00
C2	-0.24	1.00	0.23	0.07	-0.30	-0.30	-0.21	-0.44	-0.32	-0.24
C3	-0.36	0.23	1.00	0.42	-0.16	-0.60	-0.13	-0.01	-0.41	-0.36
C4	-0.34	0.07	<b>0.42</b>	1.00	-0.12	-0.48	0.12	-0.16	-0.45	-0.34
C5	0.18	-0.30	-0.16	-0.12	1.00	-0.30	-0.27	0.00	0.06	0.18
C6	0.29	-0.30	<b>-0.60</b>	<b>-0.48</b>	-0.30	1.00	0.11	-0.12	0.23	0.29
C7	-0.08	-0.21	-0.13	0.12	-0.27	0.11	1.00	-0.01	0.31	-0.08
C8	-0.08	<b>-0.44</b>	-0.01	-0.16	0.00	-0.12	-0.01	1.00	0.29	-0.08
C9	0.02	-0.32	<b>-0.41</b>	<b>-0.45</b>	0.06	0.23	0.31	0.29	1.00	0.02
C10	<b>1.00</b>	-0.24	-0.36	-0.34	0.18	0.29	-0.08	-0.08	0.02	1.00

Events C1 and C10 have perfect positive correlation as the value is 1.00 as seen in table 8. This means that change of job and self-studying have correlation. If a person feels that change of job has helped in one's leadership development, it also means that self-studying is having a huge impact on it and vice versa. These two elements are dependent on each other. This is not a surprise as the medical field requires one to study themselves as new research is done and techniques are developed all the time. Self-studying comes along many times when person is changing their job. When they take a new responsibility without

earlier knowledge they need to find themselves the necessary information that they need in that position.

Elements C4 and C3 have also quite strong positive correlation. These are responsibility for process of change and reorganization of operations. It makes sense that these two are having correlation. These elements have similar kind of skills that one can be developing in order to improve the leadership skills. Both will improve skills relating to change; how to handle it and how to make it happen. As a leader, these are important skills.

There are few quite strong negative correlations. When the events are having negative correlation, it means that certain events are linked together in a way that one is seen as effective method but when using the method, the need for other event decreases. The strongest negative correlation is between C6 and C3; management training and responsibility for process of change.

The need to have a responsibility for process of change is decreasing when one has attended management training and vice versa. This could mean that these events are having similar focus. If one event is used as a development method, the other one doesn't have to be taken as the same things are already covered in the first event. There is also no time to have these two events at the same time as they are both time consuming and requires fully attention.

The same ideology goes for all the other negative correlations. These are between the following events:

- C6 and C4; management training and the reorganization of operations.
- C8 and C2; sparring with the superior and change in the content of work.
- C9 and C3; coaching or mentoring and responsibility for process of change.
- C9 and C4; coaching or mentoring and reorganization of operations.

Quite many events are having close to zero correlation which means that there is no correlation between them so they are not dependent on each other in any way. This means that most of the events don't have any effect on each other and they can be treated as individual events.

### 5.3 Results between occupations

#### 5.3.1 Results of doctors

Among doctors the distribution between men and women leads to similar results. These are visualized in figure 23. The events with higher weight values for men are responsibility for process of change, externally challenging situations and sparring with the superior. These events are the same which raised up earlier among doctors when all the occupations were compared together.

Among women there are two events that stands out from the others; reorganization of operations and sparring with the superior. Surprisingly all the other events have quite similar weight values which indicate that their importance is equal. Since there were only two women doctors among the respondents the comparison based on gender is not totally reliable. The number of men was six which is three times the number of women.

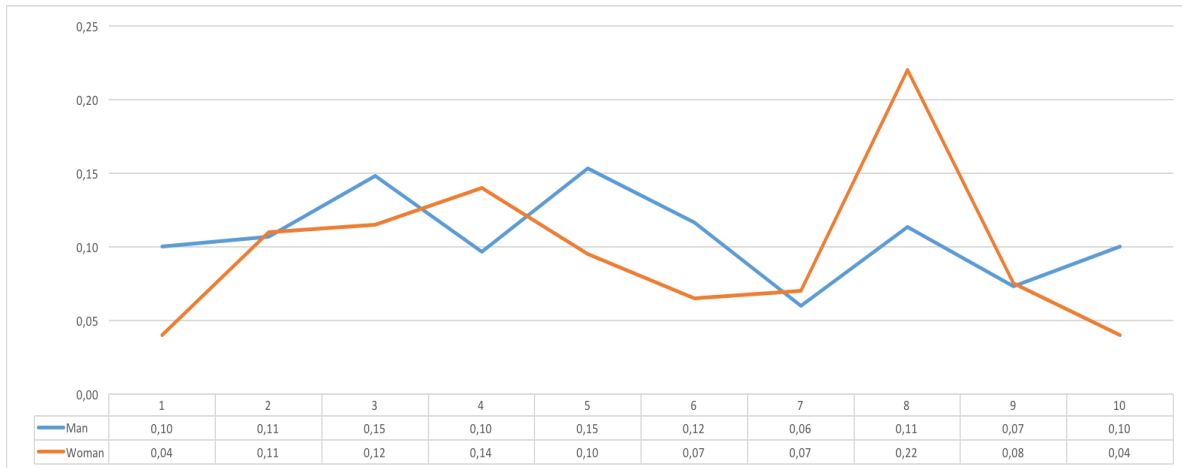


Figure 23. Results of doctors based on gender.

The distribution of ages among doctors can be grouped into three different groups; 51-55 years old, 56-60 years old and over 60 years old as seen in figure 24. The respondents that belong to group 56-60 years old seem to have completely different answers based on the other two groups. Two events are strongly popping out with higher weight than the others. These events are external challenging situations and sparring with superior.

Responses in group 51-55 years old are different as the relevant events for them are responsibility for process of change and management training. The latter one was one of the least relevant events for the respondents who belong to group 56-60 year olds. The last group that are over 60 years old see that the reorganization of operations and sparring with the superior are the events that have had a greatest effect on the development.



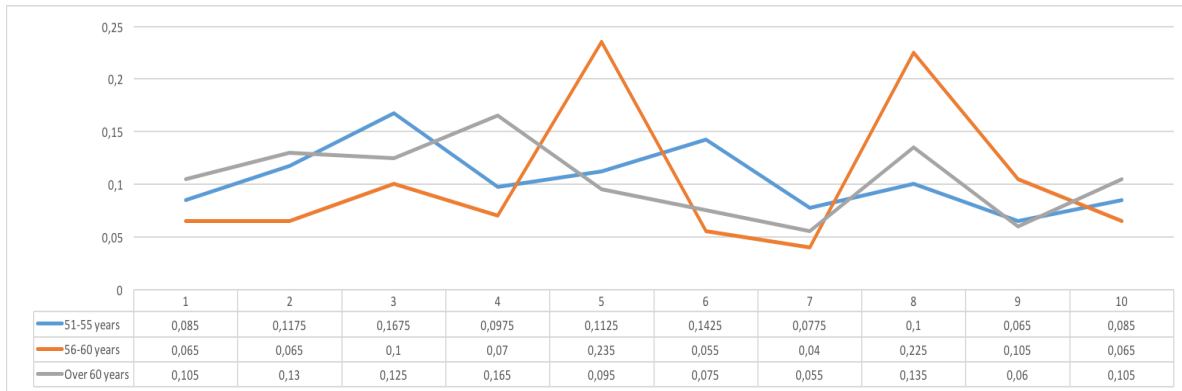


Figure 24. Results of doctors based on age.

The last figure, figure 25, presents the responses based on the work experience. One can clearly see that there are differences between these two groups; 1-5 years of experience and over 10 years of experience. There is only one respondent who has work experience 1-5 years and that is the reason why that group can't be analysed. The ones over 10 years of experience has a strong opinion that the responsibility for process of change, external challenging situations and sparring with superior are the things that has helped them to develop as a leader. The same events are risen as what we have already learned from the overall results of all doctors.

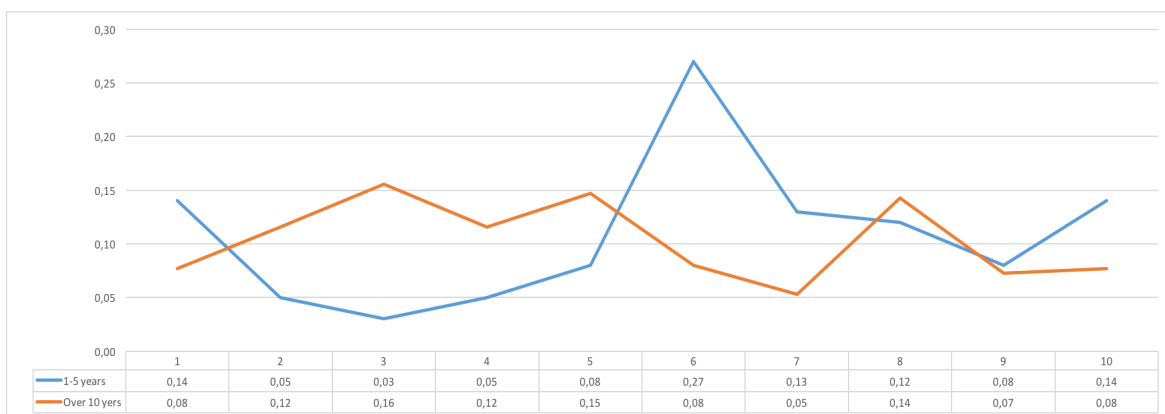


Figure 25. Results of doctors based on work experience.

The results based on education will not be presented for doctors. The reason behind this is similar than in the last chapter where overall results were presented. As education question had not been answered correctly, we are not able to analyse the results based on it in reliable way.

To get the prioritized list of the events, the same steps have been conducted here as for the overall results. Geometric mean has been taken from the results of doctors and based on that the priority vector has been created. Prioritization of the results among doctors can be seen in table 9.

Table 9. Prioritization of factors among doctors.

<b>Priority</b>	<b>Event name</b>
1	C5 Externally challenging situations
2	C8 Sparring with the superior
3	C3 Responsibility for process of change
4	C4 Reorganization of operations
5	C6 Management training
6	C2 Change in the content of work
7	C1 Change of job
8	C10 Self-studying
9	C9 Coaching or mentoring
10	C7 Results of 360 evaluation or similar feedback program

### 5.3.2 Results of healthcare workers

All healthcare workers are women so comparison between genders is not possible to do. Among healthcare workers who are women there are two key events for development. Those are change in the content of work and management training as they are clearly popping out from the others. This can be seen in figure 26.

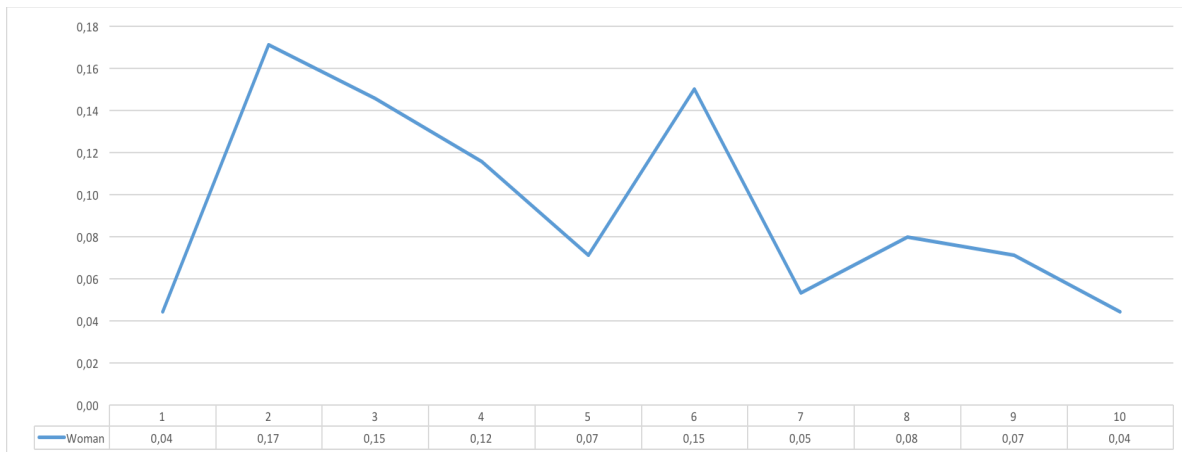


Figure 26. Results of healthcare workers based on gender.

When looking at the results of events based on age in figure 27 it seems that all the graphs look the same. There are not lots of differences between the age groups. There are few cases that are pointing out. First is the youngest group from 41 to 45 years old. They otherwise have similar answers than others but responsibility for process of change has been weight higher than the others have. On the other hand, the group over 60 years old has given lower weight to this event. There is a disagreement of the importance if this event between the youngest and oldest. Youngest persons feel that it is one of the events that have helped to develop as leader and the oldest doesn't think it is in the top three. This is explained by the fact that there is only one respondent in this group who is over 60 years old.

There are two cases that are having the highest weight on almost every group and these are change in the content of work and management training. Results of 360 evaluation or similar feedback program have been rated low here as well.

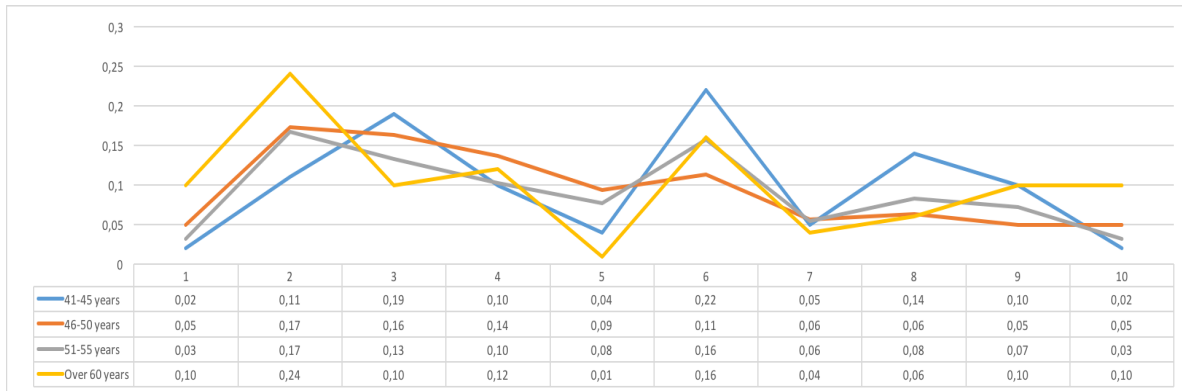


Figure 27. Results of healthcare workers based on age.

There is only one respondent who has been working less than 10 years. When looking at the results based on work experience in figure 28 one can see that persons who have been working over 10 years see that reorganization of operations and sparring with the superior are supporting the most in the development. The two least effective events are change of job and self-studying.

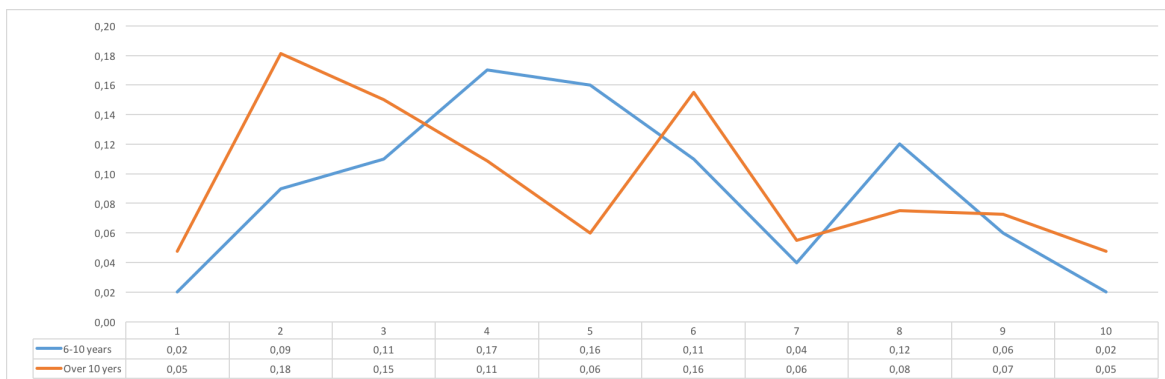


Figure 28. Results of healthcare workers based on work experience.

The results based on education will not be presented for healthcare workers. The reason behind this is similar than in the last chapter where overall results were presented. As education question had not been answered correctly, we are not able to analyse the results in reliable way.

To get prioritized list of the events, the same steps have been conducted here as for the overall results. Geometric mean has been taken from the results of healthcare workers and based on that the priority vector has been created. Prioritization of overall results among healthcare workers is presented in table 10.

Table 10. Prioritization of events among healthcare workers.

<b>Priority</b>	<b>Event name</b>
1	C2 Change in the content of work
2	C3 Responsibility for process of change
3	C4 Reorganization of operations
4	C6 Management training
5	C8 Sparring with the superior
6	C5 Externally challenging situations
7	C7 Results of 360 evaluation or similar feedback program
8	C9 Coaching or mentoring
9	C1 Change of job
10	C10 Self-studying

### 5.3.3 Comparison of the results

When comparing the results that have been presented in chapters 5.3.1 and 5.3.2 one can notice that there are many similarities. One is that both occupations count on the responsibility for process of change to be one of the most effective ways to develop as a leader. Both occupations value the events that include some kind of change. The most

important events for both seem to be those events that are part of the learning from experience group (Yukl 2013).

Management training is on the 5<sup>th</sup> place in the overall prioritization among doctors and 4<sup>th</sup> place among healthcare workers. Vistbacka (2016c) mentioned that the training has been part of the education for both already for years. The prioritization shows that the training is valued among both of the occupations and it has helped in the development.

Both occupations are valuing least coaching or mentoring and self-studying. The same topics have come up when analyzing the overall results. It seems that there is no common mentoring culture in the organization or it doesn't work in proper way. As both occupations have valued this low it could mean that it needs to be improved in order to fully utilize it in the personal development to become better leader.

Self-studying is also part of the least effective events with doctors and healthcare workers and as well with the overall results. As mentioned earlier it seems that studying is part of the everyday work in this industry and that is considered as self-evident. Could there be a perspective for this where leadership practices in healthcare industry are not learned from literature? Meaning that basic theory can be learned but the actual development and the ways to do it is more about concrete events than self-studying.

There are also differences between the occupations. Doctors value clearly the importance of sparring with own superior and the externally challenging situations. Based on Vistbacka (2016c) it seems that the doctors have had the opportunity to go abroad or they have been in charge of public crisis situations. Healthcare workers value the change of the content of work. The differences also mean that the content of the work and the career path to different leadership positions are different for each occupation. (Vistbacka 2016c.)

When looking at the results overall between these two occupations, one can see that mainly the same events are on the top for both. The same events are in the lower part of the list for both as well. Only the prioritization might differ meaning that doctors value event to be number 3 and healthcare workers value the same event to be number 4. These are small differences and it can be said that the results are more similar than different from each other. This means that the occupation doesn't have huge impact on the results and the same events are raising up here as well as it did when the overall results were presented.

## 6. DISCUSSION

This thesis concentrates on investigating the career events and their impact on leadership development in healthcare industry. In the research it was found out which events are the most effective and which are the least effective when it comes to leadership development. The differences between occupations are also covered and the dependency of the events.

All different ways to learn are part of the leadership development. All aspects are important meaning that learning from experience, developmental activities and self-development activities are part of the whole picture. One should use the combination of events in these groups in the process of becoming better leader. It might be so that one of the areas is more important than the others but they all support each other in the development.

As said, different ways of learning are supporting each other. This means for example that by reading something in the literature, one can utilize it in the concrete situation in the work life. By doing that one will learn from the experience. All the methods are linked to each other and they support each other in the learning process. As seen in the Kolb's (2015) picture of experiential learning, the personal development, work and education are all part the triangle. The importance on the events varies and it is important to be aware of them so that one can focus on the one's that has been identified to support the development in the best way.

Learning from experience is a group that is valued the most among the persons working in the healthcare organization. The industry itself might have an impact on this as one mainly learns by doing. According to Yukl (2013) learning from experience is one group of career events. There are different events inside this group that were valued as the most important ones. All the top events were methods that include change in different forms. One can be for example responsible of the change or changing the content in own work.



In the organization, it would be good to concentrate on the methods that support learning by doing. This might be even easier for the workers as the knowledge in healthcare is increasing all the time and new ways of working or technologies must be implemented. It might be so that there are not any examples in the leadership literature that could be studied. The experience of the previous changes or challenges provides a better toolbox for the leader to improve in order to face the future challenges.

Two learning styles from experiential learning theory can easily be linked to the events in learning from experience. Accommodating style and assimilating style are the two styles that can be seen in the results. Accommodating style means active and concrete experiencing. This can be linked to all those events that are considering change. People using these events want to have the concrete experience where to learn from. It is important to try and find the areas that one needs to improve. This can be achieved by actively working in challenging situations and learning from them. Assimilating style means learning by having wider picture of things. This kind of learning style is beneficial for leaders as the aim is to handle the bigger pictures. This can be also learned from the concrete experience.

There were some events that were valued as the least important. These events should be considered and evaluated inside the organization. Are they being used in a proper way or are they events that should not be used anymore? It is not wise to concentrate in using development method that is not working in the organization. Of course, people are also different and some see benefits in events where others don't.

The least effective events that the research revealed were related mostly to developmental activities. These events are mostly concentrating on giving feedback and proposals for development. The events are supporting one's development and one needs to utilize the information given in order to decide what one should be developing. It could be so that in

this organization, the utilization of these events is not yet in that level where people feel that they are able to develop themselves as a leader based on the outcomes.

The organization is already using some of these events. The 360 evaluation or similar feedback program is in place. People are aware that 360 evaluation exists but the usage of it is rather low. The Working Life Barometer is also part of the work and feedback about the leadership is received every year for leaders.

These events are seen more as a feedback for the areas where one should be developing but it seems that other events are more supporting the development as such by utilizing concrete situations. These kinds of evaluations create an important input for the leader in order to identify the areas to be improved. Based on the input from the feedback, one can concentrate on those aspects in the concrete situations. This can be for example a challenging situation one is taken care of.

The change of job was also one of the least effective way of development. This shows the culture in the industry as one doesn't change the organization easily since the organizations are usually concentrated on specific areas where one has been specialized into. Of course, the change of the employer is also part of this but it seems that people are not changing the employer or at least the people who answered this questionnaire haven't done that. Or they have not seen any benefit in doing that when considering their leadership development.

The theory says that it would be beneficial to be in different organizations and have different level of managerial experience. It is not known how much managerial experience the responds are having. But it seems that they have not been actively changing organizations.

The usage of events should be based on the occupation. As the results show the gender, age, degree or work experience in years do not play a huge role in the leadership

development. Mostly the differences are between occupations and this is because they have different contents of work. That is the reason why different events are supporting more the development inside certain occupation than the others.

Based on the results it can be concluded that occupations have different needs for development. As the comparison was made between doctors and healthcare workers, it showed that occupations valued slightly different events. Though the differences were small as the events had different prioritization based on the occupation but they only differed by one or two places in the prioritization. This means that the different occupations value similar things but the order is different. It can still be concluded that the content of the work also has a slight role when talking about the effective ways of development.

The content of work should be taken into consideration, as the environment where the person is working, is completely different based on the occupation. Based on Stiina Vistbacka's (2016b) notes the healthcare workers are working more closely with the team and doctors are working more independently. Doctors are though also working in teams. The leadership needed and the leadership skills to be developed are slightly different in these two cases and it depends always on the situation. This is because the work is different what doctors and what healthcare workers are doing.

Even though overall results showed that learning from experience is the best way for development, it is recommended to consider the occupation specific results in order to identify the methods. Learning from experience was popping out of the results when comparing doctors and healthcare workers. But when looking at the concrete events they were different.

The events that the occupations valued the most, are reflecting to the content of work. Doctors have certain possibilities in their career that might not be offered to healthcare workers as their career paths are different. That is the reason why doctors value for example

externally challenging situations as they have been given opportunities to do specific kind of work that is supporting this kind of learning. Sparring with superior and being responsible of change are also the top events among doctors. Healthcare workers also value learning from experience and the events from top of their prioritization is the change in the content of work and situations were one is responsible of change.

Events that are correlating with each other should be taken into consideration when thinking what events are used for leadership development. This is because of the reason that some events are supporting each other but then some are not. The situations where the events are not supporting each other in positive way, it should be remembered that those two events shouldn't be used at the same time as there is no benefit in doing so.

The events with positive dependency on each other are good to identify as they will increase the learning when they are used at the same time. As the results showed that change of job and self-studying were having a strong correlation it means that in order to learn in the new job, it is beneficial to do some studying on own time. Other positive relation was with responsibility for process of change and reorganization of operations. This indicates that while being responsible of some change, it might in many cases also involve reorganization of operations. These two events go hand in hand, when one is being done, the other one is linked and needs attention as well.

The events that are negatively dependent on each other are having completely opposite effect. Results show that management training and responsibility for process of change are having quite strong negative correlation. This means that when one is attending management training the need for having responsibility for process of change is decreasing as the same topics are covered already in the training. These two are also difficult to combine timewise as they both are requiring time and attention from the person in order to fully get the benefit out from them.

## 7. CONCLUSIONS

The aim of this thesis was to investigate leadership development. The research is made as a case study from one hospital district in Finland. Leadership development and the events to improve it are being investigated based on the responses gathered from questionnaire that was conducted within certain type of persons inside the hospital district. Most of the respondents are working organizationally in the middle management and some in the top management. The topic came from researcher Stiina Vistbacka as this thesis is made from pre-questionnaire to her dissertation.

The theoretical framework covers Yukl's (2013) leadership development theory and its different events that have been identified to be used in development. Also theory behind experiential learning is presented. The research data was gathered by questionnaire that was built in a way that it supports the AHP method. Results were analyzed by using AHP method that helps in identifying the best suitable option for the problem. Based on these results, analysis was conducted for what are the events that influence leadership growth and what is their importance? Can we notice any differences between occupations? Do the different events have correlation with each other?

Research questions are answered by analysing the research data with AHP method. The first research question concentrates on the prioritization and importance of the different events that are used for leadership development and growth as a leader. The prioritized list was produced and the top three events were following; responsibility for process of change, reorganization of operations and change in the content of work. All these events belong to Yukl's (2013) learning from experience group that is one of the four groups in leadership development. The importance of these events is almost equal. All these events include some kind of change.

The three least effective ways to develop and the least important events are in priority order coaching or mentoring, results of 360 evaluation or similar feedback program and change of job. Their importance was varying from 5% to 6,50% when the most important events had values varying from 14% to 18%. The first two events are from Yukl's (2013) group called developmental activities. The last one is part of learning from experience group. Overall the importance of the 10 events was close to each other and there were not huge differences. It can be said that all of them have in some way an important role in leadership development.

Based on these results one can say that events that are part of learning from experience are seen as the most effective ways to develop as a leader in healthcare industry. Developmental activities that are more like proposals what to develop are not seen so useful in this industry. They are more like support events that are not having direct effect on the growth as a leader. This might be because of the nature of the industry where knowledge and way of working is changing faster and the typical leadership culture is not present as the leaders are also the experts in the field. This also explains why the events that are part of learning from experience are valued.

The second research question is about the differences between occupations when it comes to the events that are seen as most effective in leadership development. The comparison between doctors and healthcare workers are only being concentrated on since there were not enough answers from persons working as a special employees and other workers.

Doctors and healthcare workers have similar views of the events that are useful for leadership development. Both doctors and healthcare workers have prioritized same events on the top of their prioritization list and same events to the end of the list. The event that both see as a beneficial method is the responsibility for process of change. Doctors bring up in addition to that also the external situations, being responsible of change or the support from own superior. Healthcare workers count on change in the content of work, being

responsible of change and reorganization of operations. This indicates that the content of work is different between the occupations which also leads to different events that are seen the most effective ones in order to develop as leader.

The last research question is about the correlation between the events. Almost every event is independent and doesn't have correlation with each other. There is one strong positive correlation between change of job and self-studying. Other positive correlation is between responsibility for process of change and reorganization of operations. Few negative correlations exist. The strongest is between management training and two other events; responsibility for process of change and reorganization of operations. Reorganization of operations is negatively correlation with coaching or mentoring.

The validity of the research is on good level. The research questions were answered; identified the elements that have impact on leadership development, identified the correlation between events and identified the differences between certain occupations. The overall reliability of the research is also good. The reliability could be improved by creating the questionnaire strictly based on the AHP method so that there would be compulsory questions. In this research incomplete answers were received because respondents were able to not to answer every question.

Based on these results, Stiina Vistbacka will continue the research in her dissertation where she is investigating leadership development in deeper level. Otherwise there are other future research ideas that could be used to investigate more the development. One could for example concentrate more on why experiential learning is more effective than developmental activities. Research of the differences between doctors and healthcare workers could also be made in deeper level.

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## APPENDIX

## APPENDIX 1. Questionnaire translated freely from Finnish to English. (Vistbacka 2015.)

Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Change in the content of work
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Responsibility for process of change
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Reorganization of operations
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Externally challenging situations
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Management training
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Results of 360 evaluation or similar feedback program
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Sparring with the superior
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Coaching or mentoring
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Self-studying
Change of job	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Other, what?
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Responsibility for process of change
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Reorganization of operations
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Externally challenging situations
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Management training
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Results of 360 evaluation or similar feedback program
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Sparring with the superior
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Coaching or mentoring

Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Self-studying
Change in the content of work	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Other, what?
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Reorganization of operations
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Externally challenging situations
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Management training
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Results of 360 evaluation or similar feedback program
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Sparring with the superior
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Coaching or mentoring
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Self-studying
Responsibility for process of change	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Other, what?
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Externally challenging situations
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Management training
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Results of 360 evaluation or similar feedback program
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Sparring with the superior
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Coaching or mentoring
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Self-studying
Reorganization of operations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Other, what?
Externally challenging situations	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Management training

Externally challenging situations 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Results of 360 evaluation  
or similar feedback  
program

Externally challenging situations 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Sparring with the superior

Externally challenging situations 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Coaching or mentoring

Externally challenging situations 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Self-studying

Externally challenging situations 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Other, what?

Management training 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Results of 360 evaluation or  
similar feedback program

Management training 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Sparring with the superior

Management training 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Coaching or mentoring

Management training 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Self-studying

Management training 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Other, what?

Results of 360 evaluation 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Sparring with the superior  
or similar feedback program

Results of 360 evaluation 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Coaching or mentoring  
or similar feedback program

Results of 360 evaluation 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Self-studying  
or similar feedback program

Results of 360 evaluation 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Other, what?  
or similar feedback program

Sparring with the superior 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Coaching or mentoring

Sparring with the superior 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Self-studying

Sparring with the superior 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Other, what?

Coaching or mentoring 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Self-studying

Coaching or mentoring 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Other, what?

Self-studying 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 Other, what?

## APPENDIX 2. Questionnaire used in the research in Finnish. (Stiina Vistbacka 2015.)

ESIKYSELY JOHTAJUUDEN KEHITTÄMISEEN VAIKUTTANEISTA  
 AMMATTIURAN TAPAHTUMISTA/HENKILÖKOHTAISET KOKEMUKSET  
 JOHTAJUUTEEN ENITEN VAIKUTTANEISTA AMMATTIURAN TAPAHTUMISTA  
 JA TILANTEISTA

Alla olevissa taulukoissa on tekijäpariryhmiä. Valitkaa aina yhdellä rivillä olevista tekijöistä se, jonka koette tärkeämmäksi johtajuutenne kehittymisen kannalta. Valitkaa mielestänne tärkeämpi tekijä seuraavasti; mitä tärkeämpi parista valitsemanne tekijä on suhteessa sen vertailuparina olevaan, sitä suurempi numero teidän tulee valita. Mikäli tekijät ovat yhtä tärkeitä, valitkaa nro. 1.

A	B
9 8 7 6 5 4 3 2 1	2 3 4 5 6 7 8 9

Esimerkki yllä: B on merkitykseltään erittäin paljon tärkeämpi kuin tekijä A.

Asteikon numeroiden sanalliset merkitykset

A muutos työssä	9 8 7 6 5 4 3 2 1	2 3 4 5 6 7 8 9	B coaching, mentorointi
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1 = A ja B yhtä merkityksellisiä

3 = A vähän tärkeämpi kuin B

5 = A tärkeämpi kuin B

7 = A paljon tärkeämpi kuin B

9 = A erittäin paljon tärkeämpi kuin B

B vähän tärkeämpi kuin A = 3

B tärkeämpi kuin A = 5



B paljon tärkeämpi kuin A = 7

B erittäin paljon tärkeämpi kuin A = 9

VERTAILKAA KESKENÄÄN SEURAAVIA JOHTAJUUDEN KEHITTÄMISEEN  
VAIKUTTANEITA AMMATTIURAN TILANTEITA JA TAPAHTUMIA:

Vaihtoehdot ovat:

Työpaikan vaihtaminen = koko työnantajaorganisaation vaihdos

Työn sisällön muutos = työn sisällön ja vastuualueen muutos, ura- ja tehtäväkierto

Muutosprosessivastuu = esimerkiksi uudistusten käynnistäminen, toiminnalliset muutokset

Toiminnan uudelleenorganisointi = esimerkiksi supistamispäätökset, rakenteeseen ja resursseihin liittyvät muutokset

Ulkoisesti haasteelliset tilanteet = esimerkiksi vieraissa kulttuureissa työskentely, kriisit, julkisuuden paine

Johtamiskoulutus = koulutusmuotoinen kehittäminen, lyhyet ja pitkät ohjelmat

360-arvioinnin tulokset tms. = 360-palaute tai muu organisaatiosta tuleva johtamiseen liittyvä palaute kuten työolobarometri

Sparraus esimiehen kanssa = oman esimiehen kanssa tapahtuva sparraus, sisältäen kehityskeskustelut

Coaching tai mentorointi = henkilökohtaisen kehittymisen prosessi

Omatoiminen opiskelu = esimerkiksi johtamista käsittelevän kirjallisuuden lukeminen tai verkostoituminen

Muu, mikä? = kyselyssä mainitsemaan tilanne tai tapahtuma, pyydetään määrittelemään lyhyesti

Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Työn sisällön muutos
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Muutosprosessivastuu
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Toiminnan uudelleenorganisointi
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Ulkoisesti haasteelliset tilanteet
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Johtamiskoulutus
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	360-arvioinnin tulokset tms.
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Sparraus esimiehen kanssa
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Coaching tai mentorointi
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Omatoiminen opiskelu
Työpaikan vaihtaminen	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Muu, mikä?
Työn sisällön muutos	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Muutosprosessivastuu
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Toim. uudelleenorganisointi	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Ulkoisesti haasteelliset tilanteet
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Ulk. haasteelliset tilanteet	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Johtamiskoulutus
Ulk. haasteelliset tilanteet	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	360-arvioinnin tulokset tms.
Ulk. haasteelliset tilanteet	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Sparraus esimiehen kanssa
Ulk. haasteelliset tilanteet	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Coaching tai mentorointi
Ulk. haasteelliset tilanteet	9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9	Omatoiminen opiskelu
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